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CHEMICALS IDENTIFIED IN HUMAN BIOLOGICAL MEDIA, A DATA BASE

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NONDRUGS

Acetaldehyde
75-07-0
C2-H4-O
MW 44.05, MP -123.5 C, BP 20.8 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7588 Blood	Ingestion	GC	a) 24 b) 58 c) 16 d) 4	a) 15.5-13.1 ug/ml b) 9.4-9.1 ug/ml c) 11.1-8.2 ug/ml d) 6.1-4.8 ug/ml	a) Not given b) Not given c) Not given d) Not given	a) 90 and 150 min after 0.8 mg/kg ethanol, Ojibwa men. Initial measurement 14.3 mg/ml at 60 min b) 60 and 16 min after 0.8 mg/kg ethanol, Caucasians c) 90-150 min after 0.6 mg/kg, Chinese. Initial measurement 10.1 ug/ml at 60 min d) 120 and 150 min after 0.4 mg/kg, Chinese. Initial measurement 5.8 ug/ml at 60 min Estimated from graph. Ojibwa levels significantly different. Healthy 18-33 yr olds. Caucasians and Chinese from Toronto, Canada, Ojibwa Indians from Kenora, Ontario. Caucasians were Jewish and non-Jewish. BLOOD; DRUGS; COMPARATIVE EVALUATIONS; ALCOHOLS; CANADA; RACIAL STUDIES; METABOLISM	Reed, T.E. Kalant, H. Gibbins, R.J. Kapur, B.M. Rankin, J.G. 1976 Canadian Medical Association Journal 115(9):851-855

Acetamide, N-(5-sulfamoyl-1,3,4-thiadiazol-2-yl)- (8 CI)
Acetamide, N-(5-(aminosulfonyl)-1,3,4-thiadiazol-2-yl)- (9 CI)
59-66-5
C4-H6-N4-O3-S2
MW 222.25, MP 258-259 C (effervesces)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7589 Blood, serum						Review. Assessment of clinical use of laboratory determinations for metals, anticonvulsive agents, and cardiovascular drugs. ADULTS; AGE; CHILDREN; ANEMIA; BONE DISEASES; DISEASES; MENTAL RETARDATION; METAL POISONING; NUTRITIONAL DEFICIENCIES; SKIN DISEASES; BLOOD; BLOOD PLASMA; BLOOD SERUM; LIVER; URINE; ANTIARRHYTHMIC AGENTS; ANTICONVULSANTS; DIURETICS; DRUG THERAPY; DRUGS; HYPNOTICS; MUSCLE RELAXANTS; SEDATIVES; TRANQUILIZERS; REVIEW; COPPER; DIAZEPAM; IRON; LEAD; LITHIUM; THEOPHYLLINES; ZINC; PAINTS	Weiss, H.B. Rosenthal, I.M. 1978 Journal of Analytical Toxicology 2:166-171

Acetamide, N-amidino-2-(2,6-dichlorphenyl)- (8 CI)
Benzeneacetamide, N-(aminoiminomethyl)-2,6-dichloro- (9 CI)
29110-47-2
C9-H9-Cl2-N3-O
MW 246.11

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7590 Blood, plasma	Ingestion	GC	25	1-15 ng/ml	Not given	Daily dose 2-6 mg. Negative correlation with dose level. Normalization of blood pressure at 8 ng/ml, 6 ng/day. 24-60 yr old hypertensives ADULTS; HYPERTENSION; BLOOD PLASMA; ANTIHYPERTENSIVE AGENTS	Safar, M.E. Loria, Y. Weiss, Y.A. Boutier, J.R. 1983 Journal of Clinical Pharmacology 23:385-390

Acetanilide, 4'-hydroxy- (8 CI)
Acetamide, N-(4-hydroxyphenyl)- (9 CI)
103-90-2
C8-H9-N-O2
MW 151.16, MP 169-170.5 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7591 Milk						Review. General pharmacological principles associated with excretion of drugs and chemicals in human milk. PENNSYLVANIA; UNITED STATES; ADULTS; INFANTS; MILK; SALIVA; URINE; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTICOAGULANTS; ANTIPYRETICS; DIURETICS; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; CAFFEINE; NICOTINE; PESTICIDES; SODIUM; THEOPHYLLINES; ALCOHOLIC BEVERAGES; LACTATION; METABOLISM; METABOLITES; TOBACCOS	Berlin, C.H., Jr. 1981 Obstetrics and Gynecology 58(5)(supplement):17S-23
7592 Urine						Review. General pharmacological principles associated with excretion of drugs and chemicals in human milk. PENNSYLVANIA; UNITED STATES; ADULTS; INFANTS; MILK; SALIVA; URINE; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTICOAGULANTS; ANTIPYRETICS; DIURETICS; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; CAFFEINE; NICOTINE; PESTICIDES; SODIUM; THEOPHYLLINES; ALCOHOLIC BEVERAGES; LACTATION; METABOLISM; METABOLITES; TOBACCOS	Berlin, C.H., Jr. 1981 Obstetrics and Gynecology 58(5)(supplement):17S-23

Acetic acid, (2,4-dichlorophenoxy)-
94-75-7
C8-H6-Cl2-O3
MW 221.04, MP 138 C, BP 160 C at 0.4 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7593 Blood, serum	Inhalation Dermal	GC	11	a) 15.6-482.0 ng/l b) 12.8-714.3 ng/m c) 16.0-198.7 ng/ml d) 0-466.3 ng/ml	a) Not given b) Not given c) Not given d) Not given	a) Post-exposure b) 1 day after exposure c) 2 days after exposure d) 3 days after exposure DMA-6 concentrate (3.8 lb acid equivalent/gal 2,4-D) mixed with water, sprayed at 6 gal/3 hr by a hand. Mean residue 52.41 ug/sq ft on head, 49.39 ug/sq ft on chest, 29.67 ug/sq ft on back. Measured as phenolics. Healthy 19-31 yr olds, May-August 1981, NJ NEW JERSEY; BLOOD SERUM; URINE; CHLORINE ORGANIC COMPOUNDS; HERBICIDES; AGRICULTURE; AIR POLLUTION; INHALATION; METABOLITES; OCCUPATIONAL HAZARDS	Tashar, P.K. Das, Y.T. Trout, J.R. Chattopadhyay, S.K. Brown, N.D. 1982 Bulletin of Environmental Contamination and Toxicology 29:586-591
7594 Urine	Inhalation Dermal	GC	10	a) 0.11-7.33 ug b) 0.57-13.27 ug c) 0.63-6.82 ug d) 0.99-13.44 ug e) 1.97-22.44 ug f) 1.24-16.76 ug g) 1.46-17.47 ug h) 1.22-25.26 ug	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) Post-exposure b) 12 hr c) 24 hr d) 36 hr e) 48 hr f) 60 hr g) 72 hr h) 84 hr Times after exposure. DMA-6 concentrate (3.8 lb acid equivalent/gal 2,4-D) sprayed at 6 gal/3 hr Measured as phenolics. Healthy 19-31 yr olds, May-August 1981, NJ NEW JERSEY; BLOOD SERUM; URINE; CHLORINE ORGANIC COMPOUNDS; HERBICIDES; AGRICULTURE; AIR POLLUTION; INHALATION; METABOLITES; OCCUPATIONAL HAZARDS	Tashar, P.K. Das, Y.T. Trout, J.R. Chattopadhyay, S.K. Brown, N.D. 1982 Bulletin of Environmental Contamination and Toxicology 29:586-591

Acetic acid, trichloro-
76-03-9
C2-H-Cl3-O2
MW 163.38, MP 57-58 C, BP 196-197 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7595 Blood			24	5.5-52.5 mg/l	17.5 mg/l	Workers exposed to trichloroethylene 19-55 yr olds (mean 36.8 yr) exposed 1 mo-35 yr (mean 7 yr) GERMANY; ADULTS; BLOOD; URINE; INDUSTRIAL MEDICINE; INDUSTRIAL ATMOSPHERES; METABOLITES; INDUSTRIAL CHEMICALS	Triebig, G. Trautner, P. Weltle, D. Saure, E. Valentin, H. 1982 International Archives of Occupational and Environmental Health 51:25-34
7596 Urine			24	a) 19.0-357.0 mg/g creatinine b) 3.0-201.0 mg/g creatinine c) 31.0-416.0 mg/g creatinine	a) 90.0 mg/g creatinine b) 48.0 mg/g creatinine c) 112.5 mg/g creatinine Medians	Workers exposed to trichloroethylene 19-55 yr olds (mean 36.8 yr) exposed 1 mo-35 yr (mean 7 yr) GERMANY; ADULTS; BLOOD; URINE; INDUSTRIAL MEDICINE; INDUSTRIAL ATMOSPHERES; METABOLITES; INDUSTRIAL CHEMICALS	Triebig, G. Trautner, P. Weltle, D. Saure, E. Valentin, H. 1982 International Archives of Occupational and Environmental Health 51:25-34

Aluminum
7429-90-5
Al
AtW 26.98154, MP 660 C, BP 2327 C, VP 1 mm Hg at 1340 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7597 Blood, serum		AAS	a) 6 b) 6 c) 4	a) 390-750 ug/l b) 146-586 ug/l c) 62->567 ug/l	a) Not given b) Not given c) Not given	a) High Al (250-800 ug/l) in dialysis water b) High Al (110-1085 ug/l) in dialysis water c) Low Al (10-40 ug/l) in dialysis water Hemodialysis patients with chronic renal failure. 12-40 yr olds, 9 males, 7 females Osteomalacia resistant to vitamin-D therapy, present in all patients. 14 patients had hypercalcemia. METALS; BLOOD SERUM; BONES; HEMODIALYSIS; ALUMINUM; SCOTLAND; ADULTS; CHILDREN; BONE DISEASES; KIDNEY DISEASES	Boyce, B.F. Elder, H.Y. Elliot, H.L. Fogelman, I. Fell, G.S. Juners, B.J. Boastell, G. Doyle, I.T. 1982 Lancet 2:1089-1813

(NEXT PAGE)

Aluminum
7429-90-5
Al
AtW 26.98154, MP 660 C, BP 2327 C, VP 1 mm Hg at 1540 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7598 Blood, serum	Ingestion	AS	32	4.0-12.3 umol/l	>4.0 umol/l	Exposed to Al in drinking water, dialysate, and medication (Al(OH)3). Water supply treated to reduce Al Patients undergoing dialysis At risk for osteomalacia BLOOD SERUM; HEMODIALYSIS; ALUMINUM; UNITED KINGDOM; ADULTS; KIDNEY DISEASES; DRINKING WATER	Cannata, J.B. Briggs, J.D. Junor, B.J.R. Fell, G.S. 1983 British Medical Journal 286:1937-1938
7599 Bone		AAS Histology	a) 96 b) 96 c) 56 d) 35 e) 76 f) 108	a) 0-480 mg/kg b) 0-3.5 mm/sq mm c) Not given d) Not given e) Not given f) Not given	a) Not given b) Not given c) 0.10 mm/sq mm d) 0.34 mm/sq mm e) 0.43 mm/sq mm f) 1.12 mm/sq mm	a) AAS b) Histological stain c) Fibrosis d) Mixed fibrosis and osteomalacia e) Mild osteomalacia f) Osteomalacia Correlation between a) and b). Significant differences between f) and e), f) and d) Patients in c)-f) had renal osteodystrophy. Clinical response to calcitrol greater in patients with lower Al levels. BONE DISEASES; KIDNEY DISEASES; BONES; HEMODIALYSIS; MEASUREMENT METHODS; METALS; ALUMINUM	Ott, S.M. Maloney, N.A. Coburn, J.W. Alfrey, A.C. Sherrard, D.J. 1982 New England Journal of Medicine 307(12):709-713
7600 Bone		AAS	a) 6 b) 6 c) 4	a) 55-275 ug/g b) 59-120 ug/g c) 51-174 ug/g	a) Not given b) Not given c) Not given	a) High Al (250-800 ug/l) in dialysis water b) High Al (110-1005 ug/l) in dialysis water c) Low Al (10-40 ug/l) in dialysis water Hemodialysis patients with chronic renal failure. 12-60 yr olds, 9 males, 7 females Osteomalacia, resistant to vitamin-D therapy, present in all patients. 14 patients had hypercalcemia. METALS; BLOOD SERUM; BONES; HEMODIALYSIS; ALUMINUM; SCOTLAND; ADULTS; CHILDREN; BONE DISEASES; KIDNEY DISEASES	Boyce, B.F. Elder, H.Y. Elliot, H.L. Fogelman, I. Fell, G.S. Junors, B.J. Beastall, G. Boyle, I.T. 1982 Lancet 2:1089-1013

(NEXT PAGE)

Aluminum
7429-90-5
Al
AtW 26.98154, MP 660 C, BP 2327 C, VP 1 mm Hg at 1540 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7601 Bone		AAS	35	a) 153-2,260 ppm b) 404-2,360 ppm c) 191-2,700 ppm d) 544-2,800 ppm e) 103-2,820 ppm f) 264-2,590 ppm	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) Total femur-rib, Middle Woodland Gibson site b) Total femur-rib, Late Woodland Ledders site c) Female femur-rib, Middle Woodland Gibson site d) Female femur-rib, Late Woodland Ledders site e) Male femur-rib, Middle Woodland Gibson site f) Male femur-rib, Late Woodland Ledders site Range of means Skeletal remains LEAD; MAGNESIUM; MANGANESE; POTASSIUM; SODIUM; STRONTIUM; ZINC; ALUMINUM; CALCIUM; IRON; ILLINOIS; CADAVERS; BONES	Lambert, J.B. Vlasak, S.M. Thometz, A.C. Buikstra, J.E. 1983 American Journal of Physical Anthropology 59:289-294
7602 Hair						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, N.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).

Aniline (8 CI)
Benzenamine (9 CI)
62-53-3
C6-H7-N
MW 93.12, BP 184-186 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7603 Urine	Dermal	Colorimetry	10	a) 23.0-37.5 mg b) 25.0-59.6 mg c) 138.2-157.0 mg d) 157.6-197.7 mg e) 9.3-30.3 mg f) 8.8-25.1 mg	a) 29.1 mg b) 44.9 mg c) 147.9 mg d) 177.6 mg e) 17.2 mg f) 13.6 mg	a) 1% aqueous solution, 30 min exposure, 4 cases b) 1% aqueous solution, 60 min exposure, 4 cases c) 2% aqueous solution, 30 min exposure, 4 cases d) 2% aqueous solution, 60 min exposure, 2 cases e) Liquid aniline, 30 min exposure, 5 cases f) Aniline plus 3% water, 30 min exposure, 6 cases Hands (exposed area 347-459 sq cm) immersed in aqueous solution at 20 +or- 1 C in a)-d). Forearm (26.3 sq cm) exposed to 0.25 ml in e)-f). Metabolite p-aminophenol excreted within 24 hr after beginning exposure Healthy 22-48 yr olds ADULTS; URINE; BENZENES; PHENOLS; METABOLITES; INDUSTRIAL CHEMICALS	Baranowska-Dutkiewicz, M. 1982 Toxicology Letters 10:367-372

Anthranilic acid, 4-chloro-N-furfuryl-5-sulfamoyl- (8 CI)
Benzoic acid, 5-(aminosulfonyl)-4-chloro-2-((2-furanylmethyl)amino)- (9 CI)
54-31-9
C12-H11-Cl-N2-O5-S
MW 330.77, MP 266 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7684 Blood, plasma	Injection Ingestion	HPLC	18	a) 8.00-0 ug/ml b) 2.00-0 ug/ml c) 1.25-0 ug/ml	a) Not given b) Not given c) Not given	a) 0 and 12 hr after 40 mg IV b) 1 and 12 hr after oral dose of 40 mg in solution c) 2 and 12 hr after oral dose of 40 mg as tablets. Healthy 20-31 yr olds, wt 61-83 kg ADULTS; BLOOD PLASMA; DIURETICS; COMPARATIVE EVALUATIONS	Waller, H.S. Hamilton, S.F. Nasserella, J.W. Sharanevych, M.A. Smith, H.V. Yakatan, G.J. Doluisio, J.T. 1982 Journal of Pharmaceutical Sciences 71(10):1105-1108

Antimony
7440-36-0
Sb
AtW 121.75, MP 630 C, BP 1635 C, VP 1 mm Hg at 886 C, 10 mm Hg at 960 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7605 Hair		NA	1	Not applicable	5.7 +or- 0.6 ppm	8 cm length, from distal end, obtained from Napoleon Bonaparte in 1821 CASE HISTORIES; HAIR; ANTIMONY; ARSENIC; BROMINE; GOLD; POTASSIUM; SODIUM	Lewin, P.K. Hancock, R.G.V. Voynovich, P. 1982 Nature 299:627-628
7606 Hair						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hopps, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).
7607 Milk	Ingestion	NA	21	<or= 0.05-12.8 ng/g	3.8 +or- 0.4 ng/g	Weekly samples, different foods on same day. 2-3 months beginning 15 days after childbirth. Mean calculated from samples with levels above detection limit Healthy subjects, Italy ITALY; ADULTS; MILK; IN VITRO ANALYSIS; LACTATION; ANTIMONY; CESIUM; CHROMIUM; COBALT; IRON; MERCURY; RUBIDIUM; SCANDIUM; TRACE ELEMENTS; ZINC	Clemente, G.F. Ingrao, G. Santaroni, G.P. 1982 Science of the Total Environment 24:255-265
7608 Pineal gland		NA	90	Not given	17.51x10(E-8) g/g dry wt	Autopsies 10-24 hr after death. Mean 1.86 fold greater than means for 181 other areas of 7 brains. Levels constant over a wide range of fresh weights, not related to age, sex or body surface. Range estimated from graph. 2-85 yr old males and females AUTOPSIES; PINEAL GLAND; BRAIN; COMPARATIVE EVALUATIONS; ANTIMONY; CESIUM; COBALT; IRON; RUBIDIUM; SELENIUM; ZINC	Dumnel, V. Hock, A. Kasperek, K. Feinendegen, L.E. 1982 Science of the Total Environment 24:135-146

Antipyrine (8 CI)
3H-Pyrazol-3-one, 1,2-dihydro-1,5-dimethyl-2-phenyl- (9 CI)
60-80-0
C11-H12-N2-O
MW 188.22, MP 111-113 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7609 Milk						Review. General pharmacological principles associated with excretion of drugs and chemicals in human milk. PENNSYLVANIA; UNITED STATES; ADULTS; INFANTS; MILK; SALIVA; URINE; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTICOAGULANTS; ANTIPYRETICS; DIURETICS; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; CAFFEINE; NICOTINE; PESTICIDES; SODIUM; THEOPHYLLINES; ALCOHOLIC BEVERAGES; LACTATION; METABOLISM; METABOLITES; TOBACCOS	Berlin, C.M., Jr. 1981 Obstetrics and Gynecology 58(5)(supplement):17S-23S
7618 Saliva						Review. General pharmacological principles associated with excretion of drugs and chemicals in human milk. PENNSYLVANIA; UNITED STATES; ADULTS; INFANTS; MILK; SALIVA; URINE; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTICOAGULANTS; ANTIPYRETICS; DIURETICS; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; CAFFEINE; NICOTINE; PESTICIDES; SODIUM; THEOPHYLLINES; ALCOHOLIC BEVERAGES; LACTATION; METABOLISM; METABOLITES; TOBACCOS	Berlin, C.M., Jr. 1981 Obstetrics and Gynecology 58(5)(supplement):17S-23S

Arochlor 1242 (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7611 Adipose		GC TLC NS	99	a) 0.54-2.300 ug/g b) Not given c) Not given d) Not given e) Not given f) Not given Wet wt	a) 0.307 +or- 0.272 ug/g b) 0.321 +or- 0.0335 ug/g c) 0.291 +or- 0.178 ug/g d) 0.237 +or- 0.215 ug/g e) 0.319 +or- 0.178 ug/g f) 0.384 +or- 0.428 ug/g Wet wt	a) 99 samples, all containing residues b) 53 samples, males c) 45 samples, females d) 0-25 yr olds, 33 samples e) 26-50 yr olds, 41 samples f) >50 yr olds, 24 samples Autopsies, accident victims, Canada, 1976 CANADA; ADULTS; AGE; AUTOPSIES; CHILDREN; SEX; ADIPOSE TISSUE; CHLORINATED HYDROCARBONS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LINDANE; MONACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE	Mes, J. Davies, D.J. Turton, D. 1982 Bulletin of Environmental Contamination and Toxicology 28:97-104

Aroclor 1248
12672-29-6
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7612 Adipose		GC	61	a) 0.6-414 ppm b) 7-414 ppm c) 10-150 ppm d) 4-101 ppm e) 1-86 ppm f) 10-150 ppm g) 11-114 ppm h) 10-234 ppm i) 7-414 ppm j) 2-86 ppm k) 1-34 ppm l) 5-101 ppm m) 4-22 ppm	a) 28 ppm b) 63 ppm c) 29 ppm d) 19 ppm e) 12 ppm f) 29 ppm g) 28 ppm h) 62 ppm i) 63 ppm j) 10 ppm k) 8 ppm l) 35 ppm m) 10 ppm Geometric means	a) 61 samples b) 18 males, high exposure work area (100-1,100 ug/cum Aroclor 1016) c) 15 females, high exposure work area d) 14 males, other work area e) 14 females, other work area f) 8 females, high exposure work area, employed 5 yr or less g) 7 females, high exposure work area, employed >5 yr h) 8 males, high exposure work area, employed 5 yr or less i) 10 males, high exposure work area, employed >5 yr j) 7 females, other work area, employed 5 yr or less k) 7 females, other work area, employed >5 yr l) 7 males, other work area, employed 5 yr or less m) 7 males, other work area, employed >5 yr Peaks eluting before p,p'-DDE including tri- to penta-chloro compounds. Significant differences between b) & c), b) & d), c) & e), l) & m). Correlated with plasma levels Workers in electrical capacitor manufacture, mean age 42 yr (males), 40 yr (females), mean employment 15 yr (males), 16 yr (females). Aroclors 1016 and 1221 used 1971-1976, Aroclors 1242 and 1254 used 1959-1971, Aroclor 1254 used 1946-1959. Date of study, 1976 ADIPOSE TISSUE; BLOOD PLASMA; DDE; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; INDUSTRIAL ATMOSPHERES; INDUSTRIAL PLANTS; INDUSTRIES; OCCUPATIONAL HAZARDS; INDUSTRIAL CHEMICALS	Wolff, M.S. Fischbein, A. Thornton, J. Rice, C. Lilis, R. Selikoff, I.J. 1982 International Archives of Occupational and Environmental Health 49:199-209

(NEXT PAGE)

Arochlor 1248
12672-29-6
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7413 Blood, plasma		GC	290	a) 6-2,530 ppb b) 10-244 ppb c) 6-294 ppb d) 13-388 ppb e) 40-187 ppb f) 9-340 ppb g) 7-604 ppb h) 18-2,530 ppb i) 12-1,349 ppb j) 20-1,350 ppb k) 12-391 ppb l) 49-2,530 ppb m) 18-1,000 ppb n) 11-294 ppb o) 6-604 ppb p) 10-340 ppb q) 9-251 ppb	a) 67 ppb b) 54 ppb c) 49 ppb d) 57 ppb e) 78 ppb f) 45 ppb g) 39 ppb h) 161 ppb i) 89 ppb j) 96 ppb k) 80 ppb l) 185 ppb m) 131 ppb n) 67 ppb o) 29 ppb p) 61 ppb q) 45 ppb Geometric means	a) 290 samples b) 10 males, retired c) 17 females, retired d) 50 males, low exposure e) 6 females, low exposure f) 43 males, medium exposure g) 56 females, medium exposure h) 52 males, high exposure i) 58 females, higi exposure j) 34 females, employed 5 yr or less, high exposure area k) 24 females, employed >5 yr, high exposure area l) 31 males, employed 5 yr or less, high exposure area m) 21 males, emplcyed >5 yr, high exposure area n) 38 females, employed 5 yr or less, other work area o) 39 females, employed >5 yr, other work area p) 43 males, employed 5 yr or less, other work area q) 60 males, employed >5 yr, other work area Peaks eluting before p,p'-DDE including tri- to penta-chloro compounds a) reported high exposure jobs immediately prior to present jobs Significant differences between h) & i), l) & j), q) & o), n) & o). Exposure categories, based on 1976-77 data only, indicate long-term conditions for individuals. Workers in electrical capacitor manufacture, mean age 43 yr (males), 40 yr (females), mean employment 15 yr (males), 16 yr (females). Aroclors 1016 and 1221 used 1971-1976, Aroclors 1242 and 1254 used 1959-1971, Aroclor 1254 used 1946-1959. Date of study, 1976 ADIPOSE TISSUE; BLOOD PLASMA; DDE; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; INDUSTRIAL ATMOSPHERES; INDUSTRIAL PLANTS; INDUSTRIES; OCCUPATIONAL HAZARDS; INDUSTRIAL CHEMICALS	Wolff, M.S. Fischbein, A. Thornton, J. Rice, C. Lilis, R. Selikoff, I.J. 1982 International Archives of Occupational and Environmental Health 49:199-208

Aroclor 1254
11097-69-1
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7614 Adipose		GC	61	a) 1-165 ppm b) 2-165 ppm c) 1-84 ppm d) 2-7 ppm e) 3-165 ppm f) 3-6 ppm g) 1-84 ppm	a) 14 ppm b) 21 ppm c) 10 ppm d) 5 ppm e) 24 ppm f) 4 ppm g) 12 ppm Geometric means	a) 61 samples b) 32 males from a) c) 29 females from a) d) 3 males, employed 5 yr or less e) 29 males, employed >5 yr f) 5 females, employed 5 yr or less g) 24 females, employed >5 yr Peaks eluting after p,p'-DDE including penta- to hepta-chloro compounds. Significant differences between: b) & c), e) & d), g) & f), e) & g). Correlated with plasma levels Workers in electrical capaciter manufacture, mean age 42 yr (males), 48 yr (females), mean employment 15 yr (males), 16 yr (females). Aroclors 1016 and 1221 used 1971-1976, Aroclors 1242 and 1254 used 1959-1971, Aroclor 1254 used 1946-1959. Date of study, 1976 ADIPOSE TISSUE; BLOOD PLASMA; DDE; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; INDUSTRIAL ATMOSPHERES; INDUSTRIAL PLANTS; INDUSTRIES; OCCUPATIONAL HAZARDS; INDUSTRIAL CHEMICALS	Wolff, M.S. Fischbein, A. Thornton, J. Rice, C. Lilis, R. Selikoff, I.J. 1982 International Archives of Occupational and Environmental Health 49:199-208

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Arochlor 1254
11097-69-1
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7615 Blood, plasma		GC	290	a) 0-546 ppb b) 1-546 ppb c) 1-436 ppb d) 19-538 ppb e) 5-144 ppb f) 1-416 ppb g) 5-57 ppb h) 1-400 ppb i) 1-436 ppb j) 1-546 ppb k) 1-435 ppb l) 1-43 ppb m) 2-72 pp n) 1-546 ppb o) 1-436 ppb	a) 21 ppb b) 26 ppb c) 16 ppb d) 95 ppb e) 27 ppb f) 20 ppb g) 25 ppb h) 19 ppb i) 11 ppb j) 25 ppb k) 10 ppb l) 6 ppb m) 6 ppb n) 32 ppb o) 10 ppb Geometric means	a) 290 samples b) 155 males from a) c) 135 females from a) d) 10 males, retired e) 17 females, retired f) 50 males, low exposure g) 6 females, low exposure h) 43 males, medium exposure i) 54 females, medium exposure j) 52 males, high exposure k) 58 females, high exposure l) 18 males, employed 5 yr or less m) 14 females, employed 5 yr or less n) 137 males, employed >5 yr o) 121 females, employed >5 yr Peaks eluting after p,p'-DDE including penta- to hepta-chloro compounds. Significant differences between b) & c), d) & e), h) & i), n) & l), o) & m). Levels correlated with years of employment. Levels negatively correlated with duration of retirement. Exposure categories based on 1976-77 data do not indicate longterm conditions for individuals. Workers in electrical capacitor manufacture, mean age 42 yr (males), 48 yr (females), mean employment 15 yr (males), 16 yr (females). Aroclors 1016 and 1221 used 1971-1976, Aroclors 1242 and 1254 used 1959-1971, Aroclor 1254 used 1946-1959. Date of study, 1976 ADIPOSE TISSUE; BLOOD PLASMA; DDE; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; INDUSTRIAL ATMOSPHERES; INDUSTRIAL PLANTS; INDUSTRIES; OCCUPATIONAL HAZARDS; INDUSTRIAL CHEMICALS	Wolff, M.S. Fischbein, A. Thornton, J. Rice, C. Lilis, R. Selikoff, I.J. 1982 International Archives of Occupational and Environmental Health 49:199-208

Aroclor 1260
11096-82-5
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7616 Blood, serum	Ingestion	GC	313	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 2.5 +or- 1.9 ng/ml b) 5.5 +or- 3.7 ng/ml c) 4 ng/ml d) 5.5 ng/ml e) 6 ng/ml f) 9.5 ng/ml	a) Cords. 198 cases. In 4, none detected, 130 not quantifiable (<3 ng/ml) b) Maternal. 196 cases, 44, not quantifiable c) Maternal. No fish consumed d) Maternal. 6-23 fish meals/yr e) Maternal. 24-51 fish meals/yr f) Maternal. 52-103 fish meals/yr Maternal levels correlated with age ($p<0.01$) and with consumption of contaminated Lake Michigan fish ($p<0.001$). c)-f) estimated from graph. 26 yr old mothers, who ate moderate amounts of Lake Michigan fish over 1-40 yr (mean 16.1 yr), and women who did not eat fish, MI MICHIGAN; ADULTS; NEWBORN; BLOOD SERUM; MILK; POLYCHLORINATED BIPHENYLS; DIETS; FISHES; FOOD CONTAMINATION; LACTATION; PREGNANCY	Schwartz, P.M. Jacobson, S.W. Fein, G. Jacobson, J.L. Price, H.A. 1983 American Journal of Public Health 73(3):293-296
7617 Milk	Ingestion	GC	138	a) Not given b) Not given	a) 812.7 +or- 379.4 ng/g b) 769.7 +or- 652.3 ng/g	a) 1-14 wk after delivery, 138 cases, 2 not quantifiable (<3 ng/g) b) 5 mo after delivery, 45 cases, 4 not quantifiable Fat basis. Levels correlated with consumption of contaminated Lake Michigan fish 26 yr old mothers, who ate moderate amounts of Lake Michigan fish over 1-40 yr (mean 16.1 yr), MI. MICHIGAN; ADULTS; NEWBORN; BLOOD SERUM; MILK; POLYCHLORINATED BIPHENYLS; DIETS; FISHES; FOOD CONTAMINATION; LACTATION; PREGNANCY	Schwartz, P.M. Jacobson, S.W. Fein, G. Jacobson, J.L. Price, H.A. 1983 American Journal of Public Health 73(3):293-296

Aroclor 1016
12674-11-2
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7610 Blood, serum	Ingestion	GC	a) 195 b) 190	a) Not given b) Not given	a) 0.9 +or- 0.9 ng/ml b) 1.6 +or- 4.5 ng/ml	a) Cord. In 23 cases, none detected, 171 not quantifiable (<5 ng/ml) b) Maternal. In 16 cases, nondetected, 169 not quantifiable 26 yr old mothers, who ate moderate amounts of Lake Michigan fish over 1-40 yr (mean 16.1 yr), MI MICHIGAN; ADULTS; NEWBORN; BLOOD SERUM; MILK; POLYCHLORINATED BIPHENYLS; DIETS; FISHES; FOOD CONTAMINATION; LACTATION; PREGNANCY	Schwartz, P.M. Jacobson, S.W. Fein, G. Jacobson, J.L. Price, H.A. 1983 American Journal of Public Health 73(3):293-296
7619 Milk	Ingestion	GC	138	a) Not given b) Not given	a) 158.2 +or- 165.7 ng/g b) 187.8 +or- 221.3 ng/g	a) 1-16 wk after delivery. In 11 cases non detected 85, not quantifiable (<5 ng/g) b) 5 mo after delivery, 45 cases. In 3 cases, none detected, 30 not quantifiable Fat basis 26 yr old mothers, who ate moderate amounts of Lake Michigan fish over 1-40 yr (mean 16.1 yr), MI MICHIGAN; ADULTS; NEWBORN; BLOOD SERUM; MILK; POLYCHLORINATED BIPHENYLS; DIETS; FISHES; FOOD CONTAMINATION; LACTATION; PREGNANCY	Schwartz, P.M. Jacobson, S.W. Fein, G. Jacobson, J.L. Price, H.A. 1983 American Journal of Public Health 73(3):293-296

Aroclor 1260
11096-82-5
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7620 Adipose		GC TLC NS	99	a) 0.040-6.861 ug/g b) Not given c) Not given d) Not given e) Not given f) Not given Wet wt	a) 0.944 +or- 0.902 ug/g b) 0.867 +or- 0.689 ug/g c) 1.007 +or- 1.116 ug/g d) 0.697 +or- 0.640 ug/g e) 0.926 +or- 0.567 ug/g f) 1.233 +or- 1.426 ug/g Wet wt	a) 99 samples, all containing residues b) 53 samples, males c) 45 samples, females d) 0-25 yr olds, 33 samples e) 26-50 yr olds, 41 samples f) >50 yr olds, 24 samples Autopsies, accident victims, Canada, 1976 CANADA; ADULTS; AGE; AUTOPSIES; CHILDREN; SEX; ADIPOSE TISSUE; CHLORINATED HYDROCARBONS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROCYCLOHEXANE; LINDANE; MIREX; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE	Mes, J. Davies, D.J. Turton, D. 1982 Bulletin of Environmental Contamination and Toxicology 28:97-104

Arsenic
7440-38-2
As
AtW 74.9216, MP 817 C at 28 atm, BP 613 C (sublimes), VP 1 mm Hg at 380 C, 10 mm Hg at 440 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7621 Blood	Ingestion		a) 1 b) 1 c) 1	a) Not applicable b) Not applicable c) Not applicable	a) 26 ug/dl b) 16 ug/dl c) 12 ug/dl	a) Prior to death, 12 hr after ingestion b) On admission c) On admission, at beginning of D-penicillamine therapy Unknown amount of rat poison containing As trioxide. a) and b) received dimercaprol, IM every 4 hr following ingestion, total 4 doses 2 and 4 yr old Navajo Indians, wt 10-16.7 kg CHELATES; COLORADO; CASE HISTORIES; CHILDREN; INFANTS; BLOOD; URINE; ARSENIC; COPPER; ZINC	Peterson, R.G. Rumack, B.H. 1977 Journal of Pediatrics 91(4):661-666

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Arsenic
7440-38-2
As
AtW 74.9216, MP 817 C at 28 atm, BP 613 C (sublimes), VP 1 mm Hg at 380 C, 10 mm Hg at 446 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7622 Hair		NA	1	Not applicable	1.4 +or- 0.2 ppm	9 cm length, from distal end, obtained from Napoleon Bonaparte in 1821 CASE HISTORIES; HAIR; ANTIMONY; ARSENIC; BROMINE; GOLD; POTASSIUM; SODIUM	Levin, P.E. Hancock, R.G.V. Voynovich, P. 1982 Nature 299:627-630
7623 Hair		AAS	a) 23 b) 67	a) 0.01-0.34 ppm b) 0.01-3.80 ppm	a) 0.07 +or- 0.10 ppm b) 0.27 +or- 0.46 ppm	a) Urban b) Rural Means significantly different ($p<0.05$) Urban and rural children, 1-4 yr old (mean 2.4 yr) and 4-16 yr old (mean 11.3 yr), respectively, 90% with mild learning problems, from middle to low socioeconomic levels, TN TENNESSEE; ADOLESCENTS; CHILDREN; HAIR; ARSENIC; CADMIUM; LEAD; MERCURY; METALS; NICKEL; AGRICULTURE; BIOACCUMULATION; INDUSTRIAL AREAS; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Folio, M.R. Monnigan, C. Errera, J. 1982 Environmental Pollution (Series A) 29:261-269
7624 Hair						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; ZEVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hopps, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-72).

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Arsenic
7440-38-2
As
AtW 74.9216, MP 817 C at 28 atm, BP 613 C (sublimes), VP 1 mm Hg at 380 C, 10 mm Hg at 440 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7625 Hair	Inhalation Dermal		2	12-87 ppm	Not given	Chromate-copper-arsenic-treated wood burned in home Rural family Conjunctivitis, bronchitis, sensory hyperesthesia, muscle cramps, dermatitis, nosebleeds, ear infections, gastrointestinal disturbance, alopecia ARSENIC; CHROMIUM; COPPER; AIR POLLUTION; HEALTH HAZARDS; ADOLESCENTS; ADULTS; CHILDREN; DERMATITIS; SKIN DISEASES; COMPARATIVE EVALUATIONS	Peters, H.A. Croft, W.A. Woolson, E.A. Darcey, B.A. Olson, E.A. 1983 New England Journal of Medicine 308(22):1360-1361
7626 Nail	Inhalation Dermal		8	100-5000 ppm	Not given	Chromate-copper-arsenic-treated wood burned in home Rural family Conjunctivitis, bronchitis, sensory hyperesthesia, muscle cramps, dermatitis, nosebleeds, ear infections, gastrointestinal disturbance, alopecia ARSENIC; CHROMIUM; COPPER; AIR POLLUTION; HEALTH HAZARDS; ADOLESCENTS; ADULTS; CHILDREN; DERMATITIS; SKIN DISEASES; COMPARATIVE EVALUATIONS	Peters, H.A. Croft, W.A. Woolson, E.A. Darcey, B.A. Olson, E.A. 1983 New England Journal of Medicine 308(22):1360-1361
7627 Urine	Ingestion	TLC MS AAS	15	a) 34.97-59.80% b) 4.00-7.80% c) 0.83-3.98% d) 68.80-86.20%	a) 49.91 +or- 7.25% b) 5.70 +or- 1.23% c) 3.24 +or- 0.82% d) 76.26 +or- 8.12%	a) Day 1 b) Day 2 c) Day 3 d) 8-day total % of dose excreted in 24-hr samples collected for 8 days after consuming 200 g cooked flounder containing 10.1 +or- 0.03 mg/person naturally occurring As. Volunteers, 25-60 yr old, wt 57-98 kg ADULTS; URINE; ARSENIC; FISHES; FOOD CONTAMINATION; FOODS	Tam, G.K.H. Charbonneau, S.M. Bryce, F. Sandi, E. 1982 Bulletin of Environmental Contamination and Toxicology 28:669-673

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Arsenic
7440-38-2
As
AtW 74.9216, MP 817 C at 28 atm, BP 613 C (sublimes), VP 1 mm Hg at 380 C, 10 mm Hg at 440 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7628 Urine	Ingestion		a) 1 b) 1 c) 1	a) 2,120-50 ug/24 hr b) 800-30 ug/24 hr c) 2,000-30 ug/24 hr	a) Not given b) Not given c) Not given	a) 12 hr and 7 days after unknown amount rat poison containing As trioxide b) 2 and 7 days after unknown amount rat poison containing As trioxide. Initial 12 hr collection, 306 ug c) 1 and 7 days after 15-20 mg Na arsenate as ant poison. Initial 12 hr collection, 192 ug. 2 doses dimercaprol, IM, and 100 mg/kg/day D-penicillamine, oral, divided into 4 doses beginning 6 hr after accident and continuing 5 days Both a) & b), 5 mg/kg dimercaprol, IM, every 4 hr following ingestion, total 4 doses. a) given 24 mg/kg and b) 250 mg D-penicillamine every 6 hr (beginning at 16 hr), oral, for 5 days. Estimated from graph a) 4.5 yr old, 10 kg, Navajo Indian boy b) 4.75 yr old, 16.7 kg, Navajo Indian boy c) 125 mo. old Caucasian girl CHELATES; COLORADO; CASE HISTORIES; CHILDREN; INFANTS; BLOOD; URINE; ARSENIC; COPPER; ZINC	Peterson, R.G. Rumack, B.H. 1977 Journal of Pediatrics 91(4):661-666

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Arsenic
7440-38-2
As
AtW 74.9216, MP 817 C at 28 atm, BP 613 C (sublimes), VP 1 mm Hg at 380 C, 10 mm Hg at 440 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7629 Urine	Inhalation Dermal		5	a) 19-654 ppb b) 4-311 ppb c) 75-654 ppb d) 19-103 ppb e) 26-311 ppb f) 4-269 ppb	a) 154 +or- 50 ppb b) 124 +or- 25 ppb c) 263 +or- 101 ppb d) 72 +or- 22 ppb e) 201 +or- 56 ppb f) 88 +or- 21 ppb S.E.	a) Crew II, 2 members, sprayed 0.3% Pb arsenate, mean exposure 141 +or- 25 mg/hr b) Crew I, 3 members, sprayed 0.1% Pb arsenate, mean exposure 57 +or- 9 mg/hr c) Crew II, 1 supplier, mean exposure 196 +or- 47 mg/hr d) Crew II, 1 applicator, mean exposure 95 +or- 12 mg/hr e) Crew I, 1 supplier, mean exposure 59 +or- 21 mg/hr f) Crew I, 2 applicators, mean exposure 55 +or- 9 mg/hr Total As excreted between noon and 5:30 pm of 10 hr work day. Urine monitored 9 days during 5-wk spray season. Significant differences between c),d) ($p<0.10$) and between e),f) ($p<0.10$). Mean total exposure Crew II significantly higher than Crew I. Workers, spray operations, FL FLORIDA; ADULTS; URINE; ARSENIC; PESTICIDES; AGRICULTURE; BIOACCUMULATION; INHALATION; OCCUPATIONAL HAZARDS; PESTICIDE RESIDUES	Wojeck, G.A. Nigg, H.N. Braman, R.S. Stamper, J.H. Rouseff, R.L. 1982 Archives of Environmental Contamination and Toxicology 11:661-667
7630 Urine	Ingestion	GC	8	69%-85% of dose	75% of dose	Dose (100 g plaice containing 80 mg As/kg) excreted within 5 days. Bulk excreted during first 24 hr. Healthy volunteers ADULTS; URINE; ARSENIC; FISHES; FOOD CONTAMINATION; FOODS	Luten, J.B. Riekwel-Booy, G. Rauchbaar, A. 1982 Environmental Health Perspectives 45:165-170
7631 Urine	Ingestion		1	Not given	3680 mg/l	Self inflicted chronic arsenic poisoning. Dose unknown 57 yr old Severe abdominal cramps, diarrhea, pancytopenia. With improvement of GI symptoms came acroparesthesia and gait difficulties. Peripheral neuropathy and myelopathy also present. MINNESOTA; CASE HISTORIES; METAL POISONING; URINE; ARSENIC; INSECTICIDES; METALS	Hutton, J.T. Christians, B.L. Dippel, R.L. 1982 New England Journal of Medicine 307(17):1080

Asbestos
1332-21-4
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7432 Lung		Microscopy	34	a) 1-5 ferruginous bodies b) 6-50 ferruginous bodies c) >50 ferruginous bodies	a) Not given b) Not given c) Not given	a) 12 exposed, 9 controls b) 4 exposed, 6 controls c) 3 exposed, 0 controls 2 sq cm sections 43-77 yr olds, occupationally exposed, 38-81 yr old controls. Carcinoma of lung, both groups. Predominance of lower lobe tumors in exposed group AUTOPSIES; CARCINOMAS; LUNGS; OCCUPATIONAL HAZARDS; SMOKING; ASBESTOS	Kannerstein, M. Churg, J. 1972 Cancer 30(1):16-21
7433 Lung	Inhalation	EM	24	a) 6.7-218.6 millions/g b) 0.6-393.6 millions/g Dry wt	a) 29 millions/g b) 17 millions/g c) 55 millions/g d) 10 millions/g Dry wt	a) Chrysolite (42% of total fibers), 12 subjects who died of mesothelioma b) Crocidolite (36% of total fibers), subjects in a) c) Chrysolite (53% of total fibers), 12 controls d) Crocidolite (24% of total fibers), controls Postmortems. Employees for 3-45 yr in asbestos textile factory, deaths 1964-75 at age 47-72 yr of mesothelioma. Controls, matched for sex, length of service and age at death. Deaths from cancer of lung and ovary, carcinomatosis, abestosis. UK. UNITED KINGDOM; ADULTS; AUTOPSIES; CASE HISTORIES; CARCINOMAS; OCCUPATIONAL DISEASES; SARCOMAS; LUNGS; ASBESTOS; FIBERS; INHALATION; OCCUPATIONAL HAZARDS	Wagner, J.C. Berry, G. Pooley, F.D. 1982 British Medical Journal 285:603-606

Benzamide, p-amino-N-(2-(diethylamino)ethyl)- (8 CI)
Benzamide, 4-amino-N-(2-(diethylamino)ethyl)- (9 CI)
51-06-9
C13-H21-N3-O
MW 235.37

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7634 Blood, serum						Review. Usefulness of serum levels of cardiac drugs in clinical practice. BLOOD SERUM; ANESTHETICS; ANTIARRHYTHMIC AGENTS; ANTIHYPERTENSIVE AGENTS; DIURETICS; DRUGS; STIMULANTS; REVIEW	Pennock, R.E. 1978 American Family Physician 17(6):194-196

Benzene, hexachloro-
118-74-1
C6-C16
MW 284.80, MP 231 C, BP 323-326 C, VP 1 mm Hg at 114.4 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7635 Adipose		GC TLC NS	99	a) 0.010-0.667 ug/g b) Not given c) Not given d) Not given e) Not given f) Not given Wet wt	a) 0.095 +or- 0.103 ug/g b) 0.066 +or- 0.037 ug/g c) 0.130 +or- 0.141 ug/g d) 0.051 +or- 0.026 ug/g e) 0.094 +or- 0.079 ug/g f) 0.160 +or- 0.164 ug/g Wet wt	a) 99 samples, all containing residues b) 53 samples, males c) 45 samples, females d) 0-25 yr olds, 33 samples e) 26-50 yr olds, 41 samples f) >50 yr olds, 24 samples Significant differences between b), c). Significant increase in levels with age (P<0.05). Autopsies, accident victims, Canada, 1976 CANADA; ADULTS; AGE; AUTOPSIES; CHILDREN; SEX; ADIPOSE TISSUE; CHLORINATED HYDROCARBONS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LINDANE; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE	Hoa, J. Davies, D.J. Turton, D. 1982 Bulletin of Environmental Contamination and Toxicology 28:97-104

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Benzene, hexachloro-
118-74-1
C6-Cl6
MW 284.80, MP 231 C, BP 323-326 C, VP 1 mm Hg at 114.4 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7636 Milk		GC	133	a) 0.7-6.3 ppb b) 60-1650 ppb c) 0.6-6.7 ppb d) 60-650 ppb e) 0.7-3.7 ppb f) 80-170 ppb g) 1.0-5.3 ppb h) 60-240 ppb i) 0.5-4.3 ppb j) 80-139 ppb k) 0.3-4.8 ppb l) 60-570 ppb m) 0.6-4.2 ppb n) 94-212 ppb	a) 2.1 +or- 0.9 ppb b) 200 +or- 260 ppb c) 2.2 +or- 1.2 ppb d) 128 +or- 110 ppb e) 2.1 +or- 0.8 ppb f) 112 +or- 30 ppb g) 2.3 +or- 1.2 ppb h) 114 +or- 50 ppb i) 2.7 +or- 1.0 ppb j) 95.3 +or- 35 ppb k) 2.2 +or- 1.3 ppb l) 136 +or- 110 ppb m) 1.9 +or- 0.8 ppb n) 95 +or- 30 ppb	a) Milk, 19 women from Lillehammer, mean age 27.5 yr, mean days post partum 4.7 b) Milk extractable fat, group a) c) Milk, 19 women from Oslo, mean age 28.5 yr, mean days post partum 130 d) Milk extractable fat, group c) e) Milk, 19-20 women from Kristiansand, mean age 24.1 yr, mean days post partum 5.2 f) Milk extractable fat, group e) g) Milk, 20 women from Porsgrunn, mean age 25.3 yr, mean days post partum 4.6 h) Milk extractable fat, group g) i) Milk, 19 women from Tromso, mean age 25.6 yr, mean days post partum 5.2 j) Milk extractable fat, group i) k) Milk, 17 women from Trondheim, mean age 26.6 yr, mean days post partum 4.9 l) Milk extractable fat, group k) m) Milk, 20 women from Bergen, mean age 23.8 yr, mean days post partum 1.6 n) Milk extractable fat, group m) Significant differences ($p < 0.05$) between j), n) and b). Norway, 7 cities located in different areas, varying degrees of industrialization No threat to infants' health NORWAY; ADULTS; MILK; DDE; DDT; HEXACHLOROBENZENE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; INDUSTRIAL AREAS; LACTATION; METABOLITES; PESTICIDE RESIDUES; POPULATION EXPOSURE; URBAN AREAS	Skaare, J.U. 1981 Acta Pharmacologica et Toxicologica 49:384-389

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Benzene, hexachloro-
118-74-1
C6-Cl6
MW 284.80, MP 231 C, BP 323-326 C, VP 1 mm Hg at 114.4 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7637 Milk		GC	4	a) <0.005-0.48 ug/g b) Mean detected-0.004 ug/ml	a) 0.21 +or- 0.23 ug/g b) 0.002 +or- 0.002 ug/ml	a) Extractable lipid b) Whole milk 9 of 15 samples positive Only samples containing >0.01 ug/g extractable lipid included in calculations 16-30 yr olds with infants 1-29 days old. Urban and rural areas, medium and low income levels, March 1976, Comarca, Mexico MEXICO; ADULTS; MILK; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; PESTICIDES; BIOACCUMULATION; LACTATION; METABOLITES; PESTICIDE RESIDUES; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Albert, L. Vega, F. Portales, A. 1981 Pesticides Monitoring Journal 15(3):135-138
7638 Semen		GC		0.001-0.001 ug/g	0.001 ug/g	Mean of 50 samples, 24% positive, all at detection limit of 0.001 ug/g Random samples of fertile and infertile men, Poland POLAND; SEMEN; CHLORINATED HYDROCARBONS; DDE; HEXACHLOROCYCLOHEXANE; HEXACHLOROBENZENE; LINDANE; PESTICIDES; METABOLITES; PESTICIDE RESIDUES; POPULATION EXPOSURE	Szymczynski, S.A. Wallszewski, S.M. 1981 International Journal of Andrology 4:669-674

Benzene, pentachloro-
608-93-5
C6-H-Cl5
MW 250.34, MP 86 C, BP 277 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7639 Adipose		GC TLC MS	99	a) 0.001-0.020 ug/g b) Not given c) Not given d) Not given e) Not given f) Not given Wet wt	a) 0.002 +or- 0.020 ug/g b) 0.002 +or- 0.000 ug/g c) 0.002 +or- 0.000 ug/g d) 0.002 +or- 0.000 ug/g e) 0.002 +or- 0.000 002 +or- 0.000 Wet wt	a) 99 samples, 93% containing residues b) 53 samples, males c) 45 samples, females d) 0-25 yr olds, 33 samples e) 26-50 yr olds, 61 samples f) >50 yr olds, 24 samples Results showed erratic recoveries of 3-84% (mean <30%) Autopsies, accident victims, Canada, 1976 CANADA; ADULTS; AGE; AUTOPSIES; CHILDREN; SEX; ADIPOSE TISSUE; CHLORINATED HYDROCARBONS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LINDANE; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE	Mes, J. Davies, D.J. Turton, D. 1982 Bulletin of Environmental Contamination and Toxicology 28:97-104

88

BHC, total (No postings in CHEMLINE).
58-89-9
C6-H6-Cl6
MW 290.85

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7640 Adipose			300	a) Not given b) Not given c) Not given d) Not given	a) 6.2 mg/kg b) 3.5 mg/kg c) 2.3 mg/kg d) 6.6 mg/kg	a) 1968-69 b) 1971-73 c) 1973-74 d) 1974-75 Renal fat 25-60 yr olds, from White, Indian, and Black populations, South Africa SOUTH AFRICA; ADULTS; ADIPOSE TISSUE; MEASUREMENT METHODS; REVIEW; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; PESTICIDES; FISHES; FOODS; PESTICIDE RESIDUES	Van Dyk, L.P. Wiese, I.H. Hullen, J.H.C. 1982 Residue Reviews 83:38-124

Biphenyl, chloro (8 CI)
1,1'-Biphenyl, chloro deriv (9 CI)
1336-36-3
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7641 Adipose		GC	116	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 10.17 +or- 5.69 ppm b) 6.08 +or- 3.60 ppm c) 8.01 +or- 5.13 ppm d) 7.80 +or- 5.04 ppm e) 9.18 +or- 6.59 ppm f) 7.74 +or- 4.85 ppm g) 8.94 +or- 5.71 ppm h) 6.67 +or- 3.87 ppm	a) 51 cancer patients b) 63 noncancer patients c) 58 urban residents d) 56 rural residents e) 13 farmers f) 101 nonfarmers g) 62 men h) 52 women Autopsies. Levels not correlated with residence, occupation, sex, age, wt. Association between PCB and DDE levels in subcutaneous abdominal adipose and incidence of cancer Deceased cancer and non-cancer patients, median wt 57 and 64 kg respectively, 1976-1980, Denmark DENMARK; ADULTS; AGE; AUTOPSIES; SEX; NEOPLASMS; ADIPOSE TISSUE; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FARMS; METABOLITES; OCCUPATIONAL HAZARDS; RURAL AREAS; SMOKING; URBAN AREAS	Unger, M. Olsen, J. Clausen, J. 1982 Environmental Research 29:371-376
7642 Blood	Ingestion	GC	17	a) 26-110 ppb b) 16-87 ppb	a) Not given b) Not given	a) First sampling b) Last sampling Sampled at 11-17 mo intervals. Slower elimination of PCBs with adjacent unsubstituted carbon atoms at ortho-meta positions. Patients poisoned by PCBs March-April 1979, sampled Jan 1980-June 1981, Taiwan TAIWAN; BLOOD; POLYCHLORINATED BIPHENYLS; FOOD CONTAMINATION; METABOLISM	Chen, P.H. Luo, M.L. Wong, C.K. Chen, C.J. 1982 Food and Cosmetics Toxicology 20:417-425
7643 Blood						Review. Assessment of human risk associated with consuming fish contaminated with PCBs. JAPAN; MICHIGAN; CARCINOMAS; BLOOD; COMPARATIVE EVALUATIONS; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; FOOD CONTAMINATION; FOODS; HEALTH HAZARDS; RATS	Cordle, F. Locke, B. Springer, J. 1982 Environmental Health Perspectives 45:171-182

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Biphenyl, chloro (8 CI)
1,1'-Biphenyl, chloro derivs (9 CI)
1336-36-3
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7644 Blood, serum			a) 430 b) 69 c) 963	a) Not given b) Not given c) Not given	a) 6 +or- 2 ppb b) 21 ppb c) 9 ppb	a) Children under 18 yr, entire state b) Adults, Muskegon County (area with highest PBB levels) c) Adults, areas other than Muskegon County Levels correlated with age Weighted probability sample, 1978 population, MI MICHIGAN; ADULTS; AGE; CHILDREN; SEX; ADIPOSE TISSUE; BLOOD SERUM; DDE; PESTICIDES; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FIRE RETARDANTS; FOOD CONTAMINATION; PESTICIDE RESIDUES; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Wolff, M.S. Anderson, H.A. Selikoff, I.J. 1982 Journal of the American Medical Association 247(15):2112-2116

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Biphenyl, chloro (8 Cl)
1,1'-Biphenyl, chloro deriva (9 Cl)
1336-36-3
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7445 Blood, serum		GC	119	a) 210-3330 ng/ml b) 20-250 ng/ml c) 32-2000 ng/ml d) 10-250 ng/ml e) 5-52 ng/ml f) 7-24 ng/ml g) 9-48 ng/ml h) 7-250 ng/ml i) 12-52 ng/ml j) 3-25 ng/ml	a) 502 ng/ml b) 44 ng/ml c) 237 ng/ml d) 51 ng/ml e) 14 ng/ml f) 24 ng/ml g) 22 ng/ml h) 29 ng/ml i) 21 ng/ml j) 8 ng/ml Geometric means	a) L-PCB, electrical equipment plant, capacitor processing area, 14 cases b) H-PCB, same cases c) L-PCB, electrical equipment plant, maintenance throughout plant, 12 cases d) H-PCB, same cases e) L-PCB, public utility company, maintenance work on transformers, 14 cases f) H-PCB, same cases g) L-PCB, private utility company, maintenance work on transformers, 25 cases h) H-PCB, same cases i) L-PCB, non-exposed controls, 22 cases j) H-PCB, same cases L-PCBs: <8 Cl atoms/molecule. H-PCBs: >8 Cl atoms/molecule. Air sample levels highest in electrical equipment plant. Mean serum L-PCB capacitor processing employees 5-30X that of community residents not associated with plant, mean H-PCB 2-4X greater. Electrical industry workers, occupationally exposed to PCBs and non-exposed controls, 1976-77, U.S. Increasing levels PCB correlated with mucous membrane and skin irritation, malaise, and altered peripheral sensation. UNITED STATES; ADULTS; BLOOD SERUM; COMPARATIVE EVALUATIONS; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; INDUSTRIAL ATMOSPHERES; INDUSTRIAL PLANTS; OCCUPATIONAL HAZARDS	Smith, A.B. Schloemer, J. Lowry, L.K. Smallwood, A.W. Ligo, R.M. Tanaka, S. Stringer, W. Jones, M. Marvin, M. Glueck, C.J. 1982 British Journal of Industrial Medicine 39:361-369

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Biphenyl, chloro (8 CI)
1,1'-Biphenyl, chloro derivs (9 CI)
1336-36-3
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7646 Blood, serum		GC	a) 7 b) 8 c) 9 d) 7	a) 12.2-48.0 ppb b) 10.9-42.8 ppb c) 68.8-166.2 ppb d) 45.3-169.1 ppb	a) 20.69 +or- 8.22 ppb b) 26.29 +or- 11.68 ppb c) 103.84 + or- 37.58 ppb d) 82.00 +or- 21.40 ppb	a) Controls, normal 2nd trimester pregnancies, no missed abortions b) Low serum PCB, recent missed abortions (mean 1.62) c) High serum PCB, recent missed abortions (mean 1.58) d) Former missed abortions (mean 3.43) In missed abortions, products of conception are retained in utero at least 6 weeks after fetal deaths, which occurred before week 20 of gestation. Groups c) and d) significantly different from a) (p<0.0001). Women with missed abortions (mean age 28.1 yr for high PCB group) and controls (mean age 26.7 yr) ADULTS; BLOOD SERUM; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; PREGNANCY	Dercovici, B. Wassermann, M. Cucos, S. Ben, M. Wassermann, D. Pines, A. 1983 Environmental Research 30:169-174
7647 Blood, serum		CC GC	27	a) 0.6-33.7 ppb b) 1.8-233.0 ppb c) Not given d) 51.8-233.9 ppb	a) 19.35 +or- 10.32 ppb b) 71.55 +or- 67.28 ppb c) 21.39 +or- 11.04 ppb d) 128.00 +or- 58.85 ppb	a) Normal 3rd-trimester pregnancies, 10 cases b) Premature deliveries, 17 cases c) 9 cases from b), low PCB levels d) 8 cases from b), high PCB levels (higher than mean +or- 2 S.D. of a)) Significant differences between a) and b) (p<0.025), a) and d) (p<0.001) Mean penta- and hexachlorobiphenyl isomers higher in d) and significantly different (p<0.001) from controls. BLOOD SERUM; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; METABOLITES; PESTICIDE RESIDUES; PREGNANCY	Wassermann, M. Ben, M. Bercovici, B. Wassermann, D. Cucos, S. Pines, A. 1982 Environmental Research 28:106-112

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Biphenyl, chloro (8 CI)
1,1'-Biphenyl, chloro derivs (9 CI)
1336-36-3
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7640 Milk		GC	133	a) 6.9-40.6 ppb b) 680-1910 ppb c) 6.8-74.1 ppb d) 780-1980 ppb e) 7.4-37.0 ppb f) 730-1670 ppb g) 10.6-77.9 ppb h) 620-5700 ppb i) 8.2-82.4 ppb j) 440-3700 ppb k) 3.4-97.6 ppb l) 350-2740 ppb m) 7.8-35.4 ppb n) 660-1710 ppb	a) 20.2 +or- 8.9 ppb b) 1130 +or- 460 ppb c) 26.6 +or- 15.3 ppb d) 1220 +or- 480 ppb e) 23.3 +or- 7.3 ppb f) 1250 +or- 300 ppb g) 25.7 +or- 14.2 ppb h) 1360 +or- 1080 ppb i) 25.0 +or- 17.0 ppb j) 1165 +or- 740 ppb k) 23.6 +or- 21.7 ppb l) 1120 +or- 640 ppb m) 22.7 +or- 7.9 ppb n) 1120 +or- 330 ppb	a) Milk, 19 women from Lillehammer, mean age 27.5 yr, mean days post partum 4.7 b) Milk extractable fat, group a) c) Milk, 19 women from Oslo, mean age 28.5 yr, mean days post partum 130 d) Milk extractable fat, group c) e) Milk, 19-20 women from Kristiansand, mean age 24.1 yr, mean days post partum 5.2 f) Milk extractable fat, group e) g) Milk, 20 women from Porsgrunn, mean age 25.3 yr, mean days post partum 4.6 h) Milk extractable fat, group g) i) Milk, 19 women from Tromso, mean age 25.6 yr, mean days post partum 5.2 j) Milk extractable fat, group i) k) Milk, 17 women from Trondheim, mean age 24.6 yr, mean days post partum 4.9 l) Milk extractable fat, group k) m) Milk, 20 women from Bergen, mean age 23.8 yr, mean days post partum 5.0 n) Milk extractable fat, group m) No significant differences Norway, 7 cities in different areas, varying degrees of adustrialization No threat to infants' health NORWAY; ADULTS; MILK; DDE; DDT; HEXACHLOROBENZENE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; INDUSTRIAL AREAS; LACTATION; METABOLITES; PESTICIDE RESIDUES; POPULATION EXPOSURE; URBAN AREAS	Skaare, J.U. 1981 Acta Pharmacologica et Toxicologica 49:384-389

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Biphenyl, chloro (8 Cl)
1,1'-Biphenyl, chloro deriva (9 Cl)
1336-36-3
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7649 Milk						Review. Breast milk contamination by chlorinated hydrocarbon insecticides and industrial pollutants, U.S. and Canada. CALIFORNIA; CANADA; DISTRICT OF COLUMBIA; MICHIGAN; MISSISSIPPI; TENNESSEE; TEXAS; UNITED STATES; AGE; INFANTS; RACIAL STUDIES; MILK; REVIEW; ALDRIN; DDE; DDT; DIELDRIN; CHLORINATED HYDROCARBONS; HEPTACHLOR EPOXIDE; HEPTACHLOROCYCLOHEXANE; HEXACHLOROBENZENE; INSECTICIDES; LINDANE; OXYCHLORDANE; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; DIET; FARMS; FOOD CONTAMINATION; FOODS; LACTATION; METABOLITES; RURAL AREAS; SMOKING; URBAN AREAS	Calabrese, E.J. 1982 Journal of the American College of Toxicology 1(3):91-98
7650 Milk			20	0.19-0.32 ppm	0.25 +or- 0.038 ppm	Samples in April-July 1981 Lactating mothers, Madrid, Spain SPAIN; MILK; COMPARATIVE EVALUATIONS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; MERCURY; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; LACTATION; PESTICIDE RESIDUES	Beluja, G. Hernandez, L.M. Gonzalez, M.J. Rico, M.C. 1982 Bulletin of Environmental Contamination and Toxicology 28:573-577

Bromide
24959-67-9
Br
MP 79.86, BP -7.2 C, BP 58.78 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7651 Hair		NA	1	Not applicable	4.2 +or- 5.6 ppm	8 cm length, from distal end, obtained from Napoleon Bonaparte in 1821 CASE HISTORIES; HAIR; ANTIMONY; ARSENIC; BROMINE; GOLD; POTASSIUM; SCOTOM	Levin, P.E. Hancock, R.G.V. Voynovich, P. 1982 Nature 299:627-628

Cadmium
7440-43-9
Cd
AtW 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7652 Adipose		AAS	41	0.00-0.16 ug/g dry wt 10th and 90th percentile	0.03 ug/g dry wt Median	Five samples <0.005 ug/g (level of detection). Autopsies with 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, B.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
7653 Aorta		AAS	43	0.10-1.20 ug/g dry wt 10th and 90th percentile	0.30 ug/g dry wt Median	Levels increased with age (Pearson correlation coefficient, r=0.530, S=0.001). Autopsies within 24 hr. 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, B.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115

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Cadmium
7440-43-9
Cd
AtW 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7656 Blood		AAS	a) 12 b) 12 c) 9 d) 12 e) 10 f) 6 g) 8 h) 18 i) 25 j) 6 k) 6	a) 2.6-6.3 ug/l b) 1.9-3.9 ug/l c) 1.5-8.3 ug/l d) 1.7-6.8 ug/l e) 0.6-5.5 ug/l f) 2.3-13.2 ug/l g) 0.9-2.1 ug/l h) 0.9-4.9 ug/l i) 1.3-.5.3 ug/l j) 1.9-3.7 ug/l k) 2.0-4.5 ug/l 67% range	a) 3.2 ug/l b) 2.7 ug/l c) 2.9 ug/l d) 2.8 ug/l e) 2.1 ug/l f) 6.4 ug/l g) 1.7 ug/l h) 2.7 ug/l i) 3.0 ug/l j) 2.4 ug/l k) 3.1 ug/l Geometric means	a) Exposed, glass bottle production plant, Cd pigments used on label decorations b) Controls for a) c) Exposed, plastic production plant using Cd stabilisers, mixing department d) Exposed, rolling department e) Controls for c),d) f) Exposed, aero-engine factory, Cd plating department g) Controls for f) h) Exposed, wallpaper decoration plant using Cd stabilisers and pigments i) Controls for h) j) Exposed, television tube production factory using CdS for fluorescence k) Controls for j) Significant differences between f) and g). Correlation between blood Cd (CdB) and smoking habits (P<0.001), CdB and urine Cd(CdU)(P<0.005). For each cigarette smoked per day CdB increased 1.6%. For each % increase CdB, CdU increased 0.28%. Workers at 5 plants with low-level second degree usage Cd-compounds AGE; BLOOD; URINE; COMPARATIVE EVALUATIONS; CADMIUM; METALS; HEALTH HAZARDS; INDUSTRIAL PLANTS; INDUSTRIES; OCCUPATIONAL HAZARDS; PIGMENTS; SMOKING	Wibowo, A.A.E. Herber, R.F.M. van Doyck, W. Zielhuis, R.L. 1982 International Archives of Occupational and Environmental Health 49:265-273
7655 Blood		AAS	a) 47 b) 43	a) 0.02-0.60 ug/100 ml b) 0.02-0.31 ug/100 ml	a) 0.17 ug/100 ml b) 0.11 ug/100 ml	a) Controls b) Workers exposed to Hg 0.5-16 yr (mean 5.3 yr) Data also for Hg and Pb Workers and controls in 2 factories using elemental Hg. Subjects matched with respect to age, socioeconomic status and job, 20.9-59.2 yr old, wt 50-99 kg, ht 162-198 cm, Belgium BELGIUM; ADULTS; NEUROLOGIC MANIFESTATIONS; BLOOD; URINE; CADMIUM; IRON; MERCURY; METALS; HEALTH HAZARDS; INDUSTRIAL PLANTS; OCCUPATIONAL HAZARDS; SMOKING	Roels, H. Lauwerys, R. Buchet, J.-P. Bernard, A. Barthels, A. Overstoyns, H. Gennain, J. 1983 International Archives of Occupational and Environmental Health 52:77-93

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Cadmium
7440-43-9
Cd
AtW 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7656 Blood	Inhalation	AAS		a) 3.78-9.17 ng/ml b) 0.73-1.23 ng/ml	a) 7.21 +or- 2.05 ng/ml b) 0.92 +or- 0.18 ng/ml	a) Workers in milling and bleading of phosphate fertilizers containing 42-161 ppm Cd. No protective air filters used b) Non-smoking controls Range of means for 10 sample groups a) and b) significantly different Adult New Icelanders NEW ZEALAND; ADULTS; BLOOD; URINE; CADMIUM; AGRICULTURE; AIR POLLUTION; DUST; INDUSTRIAL PLANTS; INHALATION; OCCUPATIONAL HAZARDS	Sharma, R.P. 1981 Bulletin of Environmental Contamination and Toxicology 27:806-809
7657 Blood		AAS	a) 18 b) 10	a) 5.6-23.2 ng/g b) 2.5-16.8 ng/g	a) 11.9 +or- 4.9 ng/g b) 7.9 +or- 4.9 ng/g	a) B-2 microglobulin (BM) reading in urine <500 ug/l. 29-64 yr olds (mean 50.0 yr), exposed 3-23 yr (mean 12.1 yr) b) BM reading in urine >500 ug/l. 52-65 yr olds (mean 59.9 yr), exposed 3-25 yr (mean 16.6 yr) Workers in Cd battery factory, Sweden. SWEDEN; ADULTS; BLOOD; CADMIUM; METALS; BIOACCUMULATION; INDUSTRIAL PLANTS; INDUSTRIES; OCCUPATIONAL HAZARDS	Nordberg, G.F. Garvey, J.S. Chang, C.C. 1982 Environmental Research 28:179-182
7658 Blood			a) 62 b) 88	a) 0.16-5.92 ug/100 ml b) 0.02-1.16 ug/100 ml	a) 1.53 ug/100 ml b) 0.23 ug/100 ml	a) Exposed to Pb and Cd simultaneously b) Unexposed controls 62 smelter workers with mean employment of 15.5 yr, mean age 48.6 yr, 53 smokers. Controls, mean age 38.6 yr. Heme biosynthesis inhibited by Pb. Renal function impaired by Cd. No synergistic effects. KIDNEY DISEASES; OCCUPATIONAL DISEASES; BLOOD; URINE; CADMIUM; LEAD; METALS; INDUSTRIAL PLANTS; SMELTERS	Buchet, J.-P. Roels, H. Bernard, A. Lauwerys, R. 1981 Journal of Occupational Medicine 23(5):348-352

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Cadmium
7440-43-9
Cd
AtW 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7450 Blood		AAS	473	a) <0.1-7.7 ug/l b) Not given c) Not given d) Not given	a) 0.5 ug/l b) 0.2 ug/l c) 0.4 ug/l d) 1.4 ug/l Medians	a) All 473 cases b) Nonsmokers, 164 cases c) Former smokers, 111 cases d) Current smokers, 198 cases 79 cases below detection limit of 0.1-0.2 ug/l Smokers higher than nonsmokers. Levels correlated with age (p<0.01) and number cigarettes smoked/day (p<0.001). No correlation with alcohol consumption. 19-72 yr olds, Stockholm and Vasteras, Sweden, 1980 SWEDEN; ADULTS; AGE; SEX; BLOOD; CADMIUM; LEAD; METALS; AIR POLLUTION; ALCOHOLIC BEVERAGES; BIOACCUMULATION; GASOLINE; POPULATION EXPOSURE; SMOKING; URBAN AREAS	Elinder, C.G. Friberg, L. Lind, B. Javaid, M. 1982 Environmental Research 30:233-253
7450 Blood		AEV	95	Not given	<0.16 ug/dl	Miners and millworkers 19-59 yr old caucasian and Inuit workers, Canada CANADA; ADULTS; CHILDREN; BLOOD; CADMIUM; LEAD; MERCURY; ZINC; INDUSTRIAL ATMOSPHERES; MINING; OCCUPATIONAL EXPOSURE; SMELTERS	Parent, J.P. Wigfield, D.C. 1982 International Archives of Occupational and Environmental Health 51:15-24

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Cadmium
7440-43-9
Cd
AtW 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7661 Blood		AAS	a) 143 b) 240 c) 200 d) 73 e) 100 f) 201 g) 200 h) 75 i) 207 j) 212 k) 180 l) 192	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given	a) 1.2 +or- 1.95 ug/l b) 0.9 +or- 2.10 ug/l c) 0.9 +or- 1.48 ug/l d) 0.8 +or- 1.55 ug/l e) 0.7 +or- 1.49 ug/l f) 0.5 +or- 2.39 ug/l g) 1.2 +or- 1.64 ug/l h) 0.7 +or- 4.65 ug/l i) 0.9 +or- 1.78 ug/l j) 0.5 +or- 3.27 ug/l k) 0.6 +or- 2.18 ug/l l) 0.9 +or- 3.43 ug/l Geometric means	a) Belgium, Brussels b) China, Beijing c) India, Ahmedabad d) India, Bangalore e) India, Calcutta f) Israel, Jerusalem g) Japan, Tokyo h) Mexico, Mexico City i) Peru, Lima j) Sweden, Stockholm k) United States, Baltimore l) Yugoslavia, Zagreb Mean levels in smokers about 4X nonsmokers. Elementary school teachers from urban areas. BELGIUM; CHINA; INDIA; ISRAEL; JAPAN; MARYLAND; MEXICO; PERU; SWEDEN; UNITED STATES; YUGOSLAVIA; ADULTS; AGE; AUTOPSIES; CHILDREN; SEX; BLOOD; KIDNEYS; COMPARATIVE EVALUATIONS; CADMIUM; LEAD; METALS; BIOACCUMULATION; GASOLINE; POPULATION EXPOSURE; SMOKING; URBAN AREAS	Friberg, L. Vahter, M. 1983 Environmental Research 30:95-128
7662 Blood		AAS		a) Not given b) Not given c) Not given d) Not given	a) 2.2 +or- 0.8 ng/g b) 3.5 +or- 1.7 ng/g c) 1.9 +or- 0.6 ng/g d) 2.2 +or- 0.9 ng/g	a) Maternal, non-smokers b) Maternal, smokers d) Cord blood, non-smokers e) Cord blood, smokers Significant difference between a), b) ($p<0.01$) ADULTS; NEWBORN; BLOOD; PLACENTA; MEASUREMENT METHODS; CADMIUM; BIOACCUMULATION; PREGNANCY; SMOKING	Kuhnert, P.M. Erhard, P. Kuhnert, B.R. 1982 Trace Substances in Environmental Health - XVI. A Symposium. D.D. Hemphill (Ed.) Proceedings of the University of Missouri's 16th Annual Conference on Trace Substances in Environmental Health, May 31-June 3, 1982, (pp. 370-376).

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Cadmium
7440-43-9
Cd
AtW 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7663 Bone		AAS	138	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0.24 +or- 0.17 ug/g b) 0.21 +or- 0.16 ug/g c) 0.27 +or- 0.17 ug/g d) 0.17 +or- 0.09 ug/g e) 0.22 +or- 0.16 ug/g Dry wt	a) Men, sudden death from coronary artery disease or accidents, 61 cases b) Women, deaths from coronary artery disease or accidents, 27 cases c) Men, death by chronic immobilizing diseases, 24 cases d) Women, deaths by chronic immobilizing diseases, 26 cases e) Mean of all 138 cases No significant difference between chronic disease and sudden death groups Significant difference between c) and d) (P<0.005). Cd level correlated with level Ni (p<0.001), Sr (P<0.001), and Cu (p<0.05) Finland FINLAND; AGE; CADAVERS; SEX; DISEASES; BONES; COMPARATIVE EVALUATIONS; CADMIUM; CALCIUM; COBALT; COPPER; FLUORIDE; LEAD; LITHIUM; MAGNESIUM; MANGANESE; METALS; NICKEL; STRONTIUM; ZINC; MINERAL DEPOSITS	Knuuttila, M. Lappalainen, R. Olkkonen, H. Lammi, S. Aihava, E.M. 1982 Archives of Environmental Health 37(5):290-294
7664 Bone		AAS	50	0.10-0.50 ug/g dry wt 10th and 90th percentile	0.20 ug/g ug/g dry wt Median	Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-76 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; MUSCLE; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, R.H. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115

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Cadmium
7440-43-9
Cd
AtW 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7665 Cartilage		AAS	47	a) 0.03-0.18 ug/g (10th and 90th percentile) b) Not given c) Not given Dry wt	a) 0.07ug/g (median) b) 0.08 +or- 0.02 ug/g c) 0.21 +or- 0.12 ug/g Dry wt	a) All cases b) Adult men c) Adult women Significant difference between b), c) (p<0.001). Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, R.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
7666 Hair		AAS	a) 23 b) 67	a) 0.01-12.55 ppm b) 0.01-2.97 ppm	a) 1.62 +or- 2.92 ppm b) 0.46 +or- 0.60 ppm	a) Urban b) Rural Means significantly different (p<0.01) Urban and rural children, 1-6 yr old (mean 3.9 yr) and 6-16 yr old (mean 11.3 yr), respectively, 90% with mild learning problems, from middle to low socioeconomic levels, TN TENNESSEE; ADOLESCENTS; CHILDREN; HAIR; ARSENIC; CADMIUM; LEAD; MERCURY; METALS; NICKEL; AGRICULTURE; BIOACCUMULATION; INDUSTRIAL AREAS; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Follo, H.R. Reanigan, C. Errera, J. 1982 Environmental Pollution (Series A) 29:261-269
7667 Hair						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).

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Cadmium
7440-43-9
Cd
AOW 112.40, BP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7668 Hair		AAS	65	0.11-1.27 ug/g dry wt 10th and 90th percentile	0.48 ug/g dry wt Median	Autopsies with 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AGING; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, H.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
7669 Hair		AAS	149	a) Not given b) Not given c) Not given d) Not given e) 0-0.94 ppm	a) 1.3 ppm b) 1.1 ppm c) 0.60 ppm d) 0.43 ppm e) 1.65 ppm	a) Rural area, 52 cases b) Population <2,500, 40 cases c) Population 2,500-9,000, 11 cases d) Population 10,000-25,000, 46 cases e) a)-d), 149 cases Levels in boys significantly higher than in girls ($p<.001$). Levels in blacks significantly higher than in whites ($p<.03$). Significant linear trend of decreasing Cd with increasing urbanicity ($p<0.02$). Level significantly correlated with both intelligence and school achievement scores, but not with motor impairment scores. a)-d) estimated from graph. e) calculated from log values 5-16 yr old public school students, MD MARYLAND; CHILDREN; RACIAL STUDIES; SEX; HAIR; CADMIUM; LEAD; METALS; BIOACCUMULATION; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Thatcher, R.W. Lester, B.L. McAlaster, R. Horst, R. 1982 Archives of Environmental Health 37(3):159-166

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Cadmium
7440-43-9
Cd
AEW 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7670 Heart		AAS	45	0.04-0.34 ug/g dry wt 10th and 90th percentile	0.12 ug/g dry wt Median	Levels increased with age (Pearson correlation coefficient, r=0.569, S=0.001). Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, H.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
7671 Kidney		ICP-AES	a) 42 b) 39	a) 5.1-91.1 ng/kg b) 2.8-53.8 ng/kg Wet wt	a) 31.8 ng/kg b) 16.8 ng/kg Wet wt Medians	a) Cortex b) Medulla Autopsies within 48 hr Normal adults, Great Lakes region, Ontario, Canada CANADA; ADULTS; AUTOPSIES; KIDNEYS; LIVER; MEASUREMENT METHODS; CADMIUM; CALCIUM; COPPER; IRON; MAGNESIUM; MANGANESE; PHOSPHORUS; POTASSIUM; SODIUM; ZINC	Subramanian, K.S. Meranger, J.C. 1982 Science of the Total Environment 24:147-157
7672 Kidney		AAS	55	a) 5.84-2.97 ug/g b) 1.15-100 ug/g 10th and 90th percentiles Dry wt	a) 86.1 ug/g b) 25.9 ug/g Medians Dry wt	a) Cortex, 46 samples b) Medulla, 46 samples Levels increased with age (Pearson correlation coefficient, r=0.521(a), r=0.536(b), S=0.001). Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, H.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115

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Cadmium
7440-43-9
Cd
AtW 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7673 Kidney		AAS	a) 150 b) 26 c) 51 d) 42 e) 39 f) 51 g) 50 h) 291 i) 29 j) 50	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given	a) 30.5 +or- 1.8 mg/kg b) 13.0 +or- 1.5 mg/kg c) 17.8 +or- 1.8 mg/kg d) 9.8 +or- 2.1 mg/kg e) 16.2 +or- 1.7 mg/kg f) 15.1 +or- 2.0 mg/kg g) 56.2 +or- 1.7 mg/kg h) 13.1 +or- 2.0 mg/kg i) 26.1 +or- 2.0 mg/kg j) 24.2 +or- 2.0 mg/kg Wet wt Geometric means	a) Belgium, Liege b) China, Beijing c) India, Ahmedabad d) India, Bangalore e) India, Calcutta f) Israel, Jerusalem g) Japan, Tokyo h) Sweden, Stockholm i) United States, Baltimore j) Yugoslavia, Zagreb Autopsies, cortex Levels varied with age, highest in 40-59 yr olds. Smokers, higher levels than nonsmokers. 10->60 yr olds, no kidney diseases, sudden deaths. BELGIUM; CHINA; INDIA; ISRAEL; JAPAN; MARYLAND; MEXICO; PERU; SWEDEN; UNITED STATES; YUGOSLAVIA; ADULTS; AGE; AUTOPSIES; CHILDREN; SEX; BLOOD; KIDNEYS; COMPARATIVE EVALUATIONS; CADMIUM; LEAD; METALS; BIOACCUMULATION; GASOLINE; POPULATION EXPOSURE; SMOKING; URBAN AREAS	Friberg, L. Vahter, M. 1983 Environmental Research 30:95-130
7674 Liver		AAS	75	a) <100 ppm b) 100-199 ppm c) 200+ ppm d) 92-1720 ppm Ash wt	a) Not given b) Not given c) Not given d) Not given	a) 14 cases b) 25 cases c) 36 cases d) 25 cases Autopsies, death from heart disease, cancer patients excluded. 24-65 yr olds, 7 NC hospitals NORTH CAROLINA; ADULTS; AUTOPSIES; HEART DISEASES; AORTA; LIVER; CADMIUM; LEAD; METALS; BIOACCUMULATION; DRINKING WATER; SOILS	Voors, A.W. Johnson, W.D. Shuman, H.E. 1982 Archives of Environmental Health 37(2):98-102

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Cadmium
7440-43-9
Cd
AEW 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7675 Liver		AAS	a) 5 b) 3 c) 8 d) 30 e) 20	a) 0.3-1.2 mg/kg b) 1.4-1.6 mg/kg c) 0.4-2.7 mg/kg d) 0.3-2.9 mg/kg e) 0.5-6.2 mg/kg	a) 0.7 mg/kg b) 1.5 mg/kg c) 1.3 mg/kg d) 1.2 mg/kg e) 2.0 mg/kg	a) Auckland b) Dunedin c) Palmerston North d) Rotorua e) Southland Autopsies. Significant difference between Southland and other areas, but levels not high compared to those overseas. Healthy individuals who died of accidental causes, New Zealand NEW ZEALAND; AUTOPSIES; LIVER; COMPARATIVE EVALUATIONS; CADMIUM; METALS; POPULATION EXPOSURE	Pickston, L. 1981 New Zealand Medical Journal 93:10
7676 Liver		ICP-AES	44	0.6-6.7 mg/kg wet wt	1.8 mg/kg wet wt Median	Autopsies within 48 hr Normal adults, Great Lakes region, Ontario, Canada CANADA; ADULTS; AUTOPSIES; KIDNEYS; LIVER; MEASUREMENT METHODS; CADMIUM; CALCIUM; COPPER; IRON; MAGNESIUM; MANGANESE; PHOSPHORUS; POTASSIUM; SODIUM; ZINC	Subramanian, K.S. Meranger, J.C. 1982 Science of the Total Environment 24:147-157
7677 Liver		AAS	53	0.06-17.0 ug/g dry wt 10th and 90th percentile	4.65 ug/g dry wt Median	Levels increased with age (Pearson correlation coefficient, r=0.530, P=0.001). Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, H.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115

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Cadmium
7440-43-9
Cd
AtW 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7670 Lung		AAS	51	0.06-4.56 ug/g dry wt 10th and 90th percentile	0.57 ug/g dry wt Median	Levels increased with age (Pearson correlation coefficient, r=0.291, S=0.004). Autopsies within 24 hr. 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, R.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
7670 Muscle		AAS	47	a) 0.06-0.64 ug/g (10th and 90th percentile) b) Not given c) Not given Dry wt	a) 0.19 ug/g (median) b) 0.30 +or- 0.08 ug/g c) 0.48 +or- 0.19 ug/g Dry wt	a) All cases b) Adult men c) Adult women Skeletal muscle. Significant difference between b), c) (p<0.001). Levels increased with age (Pearson correlation coefficient, r=0.625, S=0.001). Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, R.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115

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Cadmium
7440-43-9
Cd
AtW 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7600 Pancreas		AAS	83	a) 0.32-6.99 ug/g (10th and 90th percentile) b) Not given c) Not given Dry wt	a) 1.85 ug/g (median) b) 3.19 +or- 0.94 ug/g c) 4.33 +or- 1.40 ug/g Dry wt	a) All cases b) Adult men c) Adult women Significant difference between b), c) ($p<0.01$). Levels increased with age (Pearson correlation coefficient, $r=0.546$, $S=0.001$). Autopsies within 24 hr 9 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, D.H. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
7601 Placenta		AAS		a) Not given b) Not given	a) 13.7 +or- 6.6 ng/g b) 18.1 +or- 7.3 ng/g	a) Non-smokers b) Smokers Significant difference ($p<0.01$) ADULTS; NEWBORN; BLOOD; PLACENTA; MEASUREMENT METHODS; CADMIUM; BIOACCUMULATION; PREGNANCY; SMOKING	Kuhnert, P.M. Erhard, P. Kuhnert, B.R. 1982 Trace Substances in Environmental Health - XVI. A Symposium. D.D. Hemphill (Ed.) Proceedings of the University of Missouri's 16th Annual Conference on Trace Substances in Environmental Health, May 31-June 3, 1982. (pp. 370-376).

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Cadmium
7440-43-9
C6
Atm 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7682 Spleen		AAS	48	a) 0.09-1.88 ug/g (10th and 90th percentile) b) Not given c) Not given Dry wt	a) 0.40 ug/g (median) b) 0.81 +or- 0.22 ug/g c) 1.10 +or- 0.43 ug/g Dry wt	a) All cases b) Adult men c) Adult women Significant difference between b), c) (p<0.01). Levels increased with age (Pearson correlation coefficient, r=0.488, S=0.001). Autopsies with 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 48 adults (18-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; NICKEL; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, R.H. Robinson, M.F. 1982 Biological Trace Element Research 4:105-118

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Cadmium
7440-43-0
Cd
AEW 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7663 Urine		AAS	a) 12 b) 12 c) 9 d) 12 e) 10 f) 6 g) 8 h) 10 i) 25 j) 6 k) 6	a) 0.18-1.23 ug/g creatinine b) 0.14-0.75 ug/g creatinine c) 0.15-0.24 ug/g creatinine d) 0.13-1.34 ug/g creatinine e) 0.06-1.30 ug/g creatinine f) 0.46-3.40 ug/g creatinine g) 0.30-0.73 ug/g creatinine h) 0.27-2.16 ug/g creatinine i) 0.23-1.50 ug/g creatinine j) 0.30-1.70 ug/g creatinine k) 0.30-0.90 ug/g creatinine 67% range	a) 0.47 ug/g creatinine b) 0.33 ug/g creatinine c) 0.80 ug/g creatinine d) 0.49 ug/g creatinine e) 0.39 ug/g creatinine f) 1.22 ug/g creatinine g) 0.56 ug/g creatinine h) 0.80 ug/g creatinine i) 0.63 ug/g creatinine j) 0.70 ug/g creatinine k) 0.60 ug/g creatinine Geometric mean	a) Exposed, glass bottle production plant, Cd-pigments used on label decorations b) Controls c) Exposed, plastic production plant using Cd stabilizers, mixing department d) Exposed, same plant, rolling department e) Controls f) Exposed, aero-engine factory, Cd plating department g) Controls h) Exposed, wallpaper decoration plant using Cd Stabilizers and pigments i) Controls j) Exposed television tube production factory using CdS for fluorescence k) Controls Significant differences between f) and g). In 34 matched pairs there were significant differences between exposed and controls, and correlation between exposed and controls, and correlation between age and Cd levels (urine, blood). Workers with low-level, second degree usage of Cd-compounds AGE; BLOOD; URINE; COMPARATIVE EVALUATIONS; CADMIUM; METALS; HEALTH HAZARDS; INDUSTRIAL PLANTS; INDUSTRIES; OCCUPATIONAL HAZARDS; PIGMENTS; SMOKING	Wibowo, A.A.E. Herber, R.F.H. van Dyck, W. Zielhuis, R.L. 1982 International Archives of Occupational and Environmental Health 49:265-273
7664 Urine		AAS	a) 47 b) 43	a) 0.23-2.17 ug/g creatinine b) 0.20-1.78 ug/g creatinine	a) 0.86 ug/g creatinine b) 0.78 ug/g creatinine	a) Controls b) Workers exposed to Hg 0.5-16 yr (mean 5.3 yr) Data also for Hg and Pb Workers and controls in 2 factories using elemental Hg. Subjects matched with respect to age, socioeconomic status and job, 20.9-59.2 yr old, wt 50-99 kg, ht 162-190 cm, Belgium BELGIUM; ADULTS; NEUROLOGIC MANIFESTATIONS; BLOOD; URINE; CADMIUM; IRON; MERCURY; METALS; HEALTH HAZARDS; INDUSTRIAL PLANTS; OCCUPATIONAL HAZARDS; SMOKING	Roels, H. Lauwerys, R. Buchet, J.-P. Bernard, A. Barthels, A. Oversteyns, M. Geerssin, J. 1982 International Archives of Occupational and Environmental Health 50:77-93

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Cadmium
7440-43-9
Cd
AEW 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7685 Urine	Inhalation	AAS		a) 4.78-6.20 ug/ml b) 0.36-0.91 ug/ml	a) 5.20 +or- 0.53 ug/ml b) 0.54 +or- 0.20 ug/ml	a) Workers in milling and blending of phosphate fertilizers containing 42-141 ppm Cd. No protective air filters used b) Non-smoking controls Range of means for 10 sample groups a) and b) significantly different Adult New Zealanders NEW ZEALAND; ADULTS; BLOOD; URINE; CADMIUM; AGRICULTURE; AIR POLLUTION; DUST; INDUSTRIAL PLANTS; INHALATION; OCCUPATIONAL HAZARDS	Sharma, R.P. 1981 Bulletin of Environmental Contamination and Toxicology 27:886-889
7686 Urine			a) 62 b) 88	a) 2.02-58.86 ug/g creatinine b) 0.07-1.93 ug/g creatinine	a) 15.47 ug/g creatinine b) 0.88 ug/g creatinine	a) Exposed to Pb and Cd simultaneously b) Unexposed controls 62 smelter workers with mean employment of 15.5 yr, mean age 48.4 yr, 53 smokers. Controls, mean age 38.6 yr. Heme biosynthesis inhibited by Pb. Renal function impaired by Cd. No synergistic effects. KIDNEY DISEASES; OCCUPATIONAL DISEASES; BLOOD; URINE; CADMIUM; LEAD; METALS; INDUSTRIAL PLANTS; SMELTERS	Buchet, J.-P. Roels, H. Bernard, A. Lauwerys, R. 1981 Journal of Occupational Medicine 23(5):340-352
7687 Urine			a) 13 b) 15	a) 1-10.1 ug/g creatinine b) 4-14 ug/g creatinine	a) Not given b) Not given	a) Inhabitants of non-polluted area b) Inhabitants of Cd-polluted area Levels correlated with urinary metallothionein (r=0.66, p=0.001). Estimated from graph. Japanese women >60 yr old, no known occupational exposure to heavy metals. JAPAN; KIDNEY DISEASES; URINE; CADMIUM; COPPER; METALS	Tohyama, C. Shaikh, Z.A. Nogawa, K. Kobayashi, E. Honda, R. 1982 Archives of Toxicology 50:159-166

Calcium
7440-70-2
Ca
AtW 40.08, MP 850 C, BP 1440 C, VP 10 mm Hg at 982 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7688 Blood	Ingestion	AAS	6	a) 9.0-9.9 mg/100 ml b) 9.0-10.2 mg/100 ml c) 9.2-9.8 mg/100 ml d) 9.0-9.5 mg/100 ml	a) 9.5 mg/100 ml b) 9.6 mg/100 ml c) 9.6 mg/100 ml d) 9.3 mg/100 ml	a) 0.9 g N/day and 100 mg Ca/day b) 12 g N/day and 100 mg Ca/day c) 24 g N/days. and 86 mg Ca/day d) 12 g N/day and 1,000 mg Ca/day Intake for 15 days. Fasting sample at end of period. Ca and protein intake had no effect on serium Ca. 22-32 yr olds, 58-82 kg, 172-192 cm DIET; ADULTS; BLOOD; SKIN; URINE; CALCIUM; MAGNESIUM; PHOSPHORUS; PROTEINS; DIETS; METABOLISM	Chu, J-Y. Margen, S. Costa, F.M. 1975 American Journal of Clinical Nutrition 28(9):1028-1035
7689 Blood, plasma		AAS	177	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given	a) 8.60 +or- 0.91 mg% b) 7.58 +or- 0.36 mg% c) 8.78 +or- 0.18 mg% d) 8.40 +or- 0.26 mg% e) 7.34 +or- 0.61 mg% f) 6.20 +or- 0.42 mg% g) 7.38 +or- 0.67 mg% h) 7.42 +or- 0.43 mg% i) 7.20 +or- 0.44 mg% j) 9.17 +or- 0.76 mg%	a) 5th mo pregnancy, 8 cases b) 6th mo pregnancy, 29 cases c) 7th mo pregnancy, 58 cases d) 8th mo pregnancy, 60 cases e) 9th mo pregnancy, 16 cases f) Family income <1000 Naira, 19 cases g) Family income 1000-2000 Naira, 111 cases h) Family income 2001-3000 Naira, 35 cases i) Family income 3001-4000 Naira, 5 cases j) Family income >4000 Naira, 7 cases Significant differences between j) and f)-i) (p<0.01) Pregnant women, Ibadan, Nigeria NUTRITIONAL DEFICIENCIES; BLOOD PLASMA; CALCIUM; MAGNESIUM; PHOSPHORUS; DIETS; FOODS; PREGNANCY; NIGERIA	Akinyelu, L.O. Akinyele, I.O. 1982 Nutrition Reports International 26(5):887-893

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Calcium
7440-70-2
Ca
AtW 40.08, MP 850 C, BP 1440 C, VP 10 mm Hg at 983 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7690 Blood, plasma	Ingestion	AAS RS	14	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 1.93 +or- 0.38 mmol b) 2.43 +or- 0.03 mmol c) 2.68 +or- 0.13 mmol d) 2.45 +or- 0.13 mmol e) 1.94 +or- 0.12 mmol f) 2.32 +or- 0.12 mmol g) 2.56 +or- 0.08 mmol h) 2.24 +or- 0.08 mmol S.E.	a) Infants fed mothers' milk, start of study, 7 cases b) At 1 wk, 7 cases c) At 2 wk, 6 cases d) At 4 wk, 5 cases e) Infants fed formual, start of study, 6 cases f) At 1 wk, 7 cases g) At 2 wk, 5 cases h) At 4 wk (+ supplements NaHCO3, Ca-lactate), 5 cases Significant increase over 4 wk period ($p<0.05$) in both groups. Premature infants, birth wt <1.3 kg, mean gestational age 28 wk, Canada PREMATURE INFANTS; CANADA; NUTRITIONAL DEFICIENCIES; BLOOD PLASMA; MILK; COMPARATIVE EVALUATIONS; CALCIUM; MAGNESIUM; MINERALS; PHOSPHORUS; POTASSIUM; SODIUM; FOODS; LACTATION	Atkinson, S.A. Radde, I.C. Anderson, G.H. 1983 Journal of Pediatr'cs 102(1):99-106
7691 Blood, serum			256	a) Not given b) Not given c) Not given d) 2.52-2.69 mmol/l e) 2.43- 2.47 mmol/l f) 2.37-2.45 mmol/l	a) 2.45 +or- 0.08 mmol/l b) 2.43 +or- 0.08 mmol/l c) 2.36 +or- 0.16 mmol/l d) Not given e) Not given f) Not given	a) Europeans, 65 cases, March 1976 b) West Indians, 67 cases, March 1976 c) Asians, 124 cases, March 1976 d) Europeans, March and October 1976, 5 cases with initial level Vitamin D < 8 ug/l e) West Indians, March and October 1976, 14 cases with initial level vitamin D < 8 ug/l f) Asians, March and October 1976, 124 cases with initial level Vitamin D < 8 ug/l ASIA; INDIA; UNITED KINGDOM; ADULTS; CHILDREN; RACIAL STUDIES; BONE DISEASES; BLOOD SERUM; CALCIUM; VITAMIN D; VITAMINS; DIETS; GENETIC EFFECTS	Ellis, G. Woodhead, J.S. Cooke, W.T. 1977 Lancet 1:825-828

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Calcium
7440-70-2
Ca
AtW 40.08, MP 850 C, BP 1440 C, VP 10 mm Hg at 983 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7692 Blood, serum			234	a) 2.2-2.25 mmol/l b) 2.1-2.82 mmol/l c) 2.08-2.57 mmol/l d) 2.05-2.68 mmol/l e) 2.05-2.9 mmol/l f) 2.03-2.8 mmol/l g) 2.0-2.5 mmol/l h) 2.0-2.6 mmol/l	a) 2.41 mmol/l b) 2.43 mmol/l c) 2.32 mmol/l d) 2.34 mmol/l e) 2.35 mmol/l f) 2.36 mmol/l g) 2.24 mmol/l h) 2.26 mmol/l	a) 63 hypertensive men b) 70 hypertensive women c) 52 normotensive men d) 51 normotensive women e) 63 hypertension men f) 70 hypertensive women g) 52 normotensive men h) 50 normotensive women Levels for total Ca in a)-d), corrected for serum albumin e)-h). Significant differences. Estimated from graph. 45-64 yr olds, Renfrew, Scotland SCOTLAND; ADULTS; SEX; HYPERTENSION; BLOOD SERUM; COMPARATIVE EVALUATIONS; CALCIUM; BLOOD PRESSURE	Sangal, A.D. Beevers, D.G. 1982 Lancet 2(8296):493
7693 Bone		AAS	35	a) 37.0-33.0% b) 37.5-32.9% c) 36.2-31.7% d) 37.0-34.5% e) 37.9-31.4% f) 37.9-30.9%	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) Total femur-rib, Middle Woodland Gibson site b) Total femur-rib, Late Woodland Ledders site c) Female femur-rib, Middle Woodland Gibson site d) Female femur-rib, Late Woodland Ledders site e) Male femur-rib, Middle Woodland Gibson site f) Male femur-rib, Late Woodland Ledders site Range of means Skeletal remains LEAD; MAGNESIUM; MANGANESE; POTASSIUM; SODIUM; STRONTIUM; ZINC; ALUMINUM; CALCIUM; IRON; ILLINOIS; CADAVERS; BONES	Lambert, J.B. Vlasak, S.M. Thometz, A.C. Buikstra, J.E. 1982 American Journal of Physical Anthropology 59:289-294
7694 Hair		X-ray spectrom	a) 1 b) 1	a) 209.3-216.6 ug/g b) 1100-1800 ug/g	a) Not given b) Not given	a) 5 measurements at counting times of 300-5000 sec, 1 mm section of single hair, linear density 6.6 ug/mm b) 0-240 mm from cut end, Iraqi woman from one region Estimated from graph CANADA; IRAQ; ADULTS; HAIR; MEASUREMENT METHODS; CALCIUM; COPPER; IRON; LEAD; MERCURY; ZINC; BIOACCUMULATION; DIETS; FISHES; FOOD CONTAMINATION	Toribara, T.Y. Jackson, D.A. French, W.R. Thompson, A.C. Jaklevic, J.M. 1982 Analytical Chemistry 54:1844-1849

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Calcium
7440-70-2
Ca
AtW 40.08, MP 850 C, BP 1440 C, VP 10 mm Hg at 983 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7695 Hair						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).
7696 Kidney		ICP-AES	a) 42 b) 39	a) 70-383 mg/kg b) 85-276 mg/kg Wet wt	a) 150 mg/kg b) 149 mg/kg Wet wt Median	a) Cortex b) Medulla Autopsies within 48 hr Normal adults, Great Lakes region, Ontario, Canada CANADA; ADULTS; AUTOPSIES; KIDNEYS; LIVER; MEASUREMENT METHODS; CADMIUM; CALCIUM; COPPER; IRON; MAGNESIUM; MANGANESE; PHOSPHORUS; POTASSIUM; SODIUM; ZINC	Subramanian, K.S. Meranger, J.C. 1982 Science of the Total Environment 24:147-157
7697 Liver		ICP-AES	44	48-144 mg/kg wet wt	65 mg/kg wet wt Median	Autopsies within 48 hr Normal adults, Great Lakes region, Ontario, Canada CANADA; ADULTS; AUTOPSIES; KIDNEYS; LIVER; MEASUREMENT METHODS; CADMIUM; CALCIUM; COPPER; IRON; MAGNESIUM; MANGANESE; PHOSPHORUS; POTASSIUM; SODIUM; ZINC	Subramanian, K.S. Meranger, J.C. 1982 Science of the Total Environment 24:147-157
7698 Milk		AAS	16	Not given	241.2 +or- 61.9 ug/ml	20.2% in fat, 43.8% in proteins, 33.8% in low molecular wt fraction, 2.3% in large particles such as casein micelles. Samples collected at 2nd nursing of day. Level per ml increased with volume of milk expressed at a single nursing. Level not related to duration of lactation Healthy mothers in various stages of lactation ADULTS; MILK; CALCIUM; COPPER; MAGNESIUM; MINERALS; TRACE ELEMENTS; ZINC; LACTATION	Fransson, G.-B. Lonnerdal, B. 1982 Journal of Pediatrics 101(6):504-508

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Calcium
7440-70-2
Ca
AtW 40.08, MP 850 C, BP 1440 C, VP 10 mm Hg at 983 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7699 Milk		AAS ES	7	a) Not given b) Not given c) Not given	a) 7.45 +or- 0.90 mmol b) 6.30 +or- 0.60 mmol c) 6.75 +or- 0.50 mmol S.E.	a) 6-8 days postpartum b) 13-15 days postpartum c) 26-28 days postpartum Mothers of premature infants. Infant birth wt <1.3 kg, mean gestational age 28 wk, Canada PREMATURE INFANTS; CANADA; NUTRITIONAL DEFICIENCIES; BLOOD PLASMA; MILK; COMPARATIVE EVALUATIONS; CALCIUM; MAGNESIUM; MINERALS; PHOSPHORUS; POTASSIUM; SODIUM; FOODS; LACTATION	Atkinson, S.A. Radde, I.C. Anderson, G.H. 1983 Journal of Pediatrics 102(1):99-106
7700 Skin	Ingestion	AAS	6	a) 6-17 mg /day b) 10-22 mg /day c) 5-36 mg /day d) 12-16 mg /day	a) 13 +or- 4 mg /day b) 15 +or- 4 mg /day c) 17 +or- 11 mg /day d) 14 +or- 2 mg /day	a) 0.9 g N/day and 100 mg Ca/day b) 12 g N/day and 106 mg Ca/day c) 24 g N/day and 86 mg Ca/day d) 12 g N/day and 1,004 mg Ca/day Intake for 15 days. Samples collected between day 8 and 14. Ca and protein intake had no effect on dermal Ca loss. 22-32 yr olds, 58-82 kg, 172-192 cm SWEAT; ADULTS; BLOOD; SKIN; URINE; CALCIUM; MAGNESIUM; PHOSPHORUS; PROTEINS; DIETS; METABOLISM	Chu, J-Y. Margen, S. Costa, F.M. 1975 American Journal of Clinical Nutrition 28(9):1028-1035
7701 Sweat	Ingestion	AAS	6	a) 45-86 mg/kg b) 55-168 mg/kg c) 30-121 mg/kg d) 46-96 mg/kg	a) 68 mg/kg b) 119 mg/kg c) 81 mg/kg d) 68 mg/kg	a) 0.9 g N/day and 100 mg Ca/day b) 12 g N/day and 106 mg Ca/day c) 24 g N/day and 86 mg Ca/day d) 12 g N/day and 1,004 mg Ca/day Intake for 15 days. Loss after 60 min strenuous exercise at end of 15 day diet. Ca loss was large after activity even at low Ca intakes 22-32 yr olds, 58-82 kg, 172-192 cm SWEAT; ADULTS; BLOOD; SKIN; URINE; CALCIUM; MAGNESIUM; PHOSPHORUS; PROTEINS; DIETS; METABOLISM	Chu, J-Y. Margen, S. Costa, F.M. 1975 American Journal of Clinical Nutrition 28(9):1028-1035

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Calcium
7440-70-2
Ca
AtW 40.08, MP 850 C, BP 1440 C, VP 10 mm Hg at 983 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7702 Sweat						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).
7703 Urine	Ingestion	AAS	6	a) 10-86 mg/day b) 33-253 mg/day c) 65-282 mg/day d) 62-211 mg/day	a) 51 +or- 30 mg/day b) 99 +or- 80 mg/day c) 161 +or- 88 mg/day d) 160 +or- 69 mg/day	a) 0.9 g N/day and 100 mg Ca/day b) 12 g N/day and 186 mg Ca/day c) 24 g N/day and 86 mg Ca/day d) 12 g N/day and 1,004 mg Ca/day Intake for 15 days. Range of means. Urinary Ca excretion increased with high-protein intake. 22-32 yr olds, 58-82 kg, 172-193 cm SWEAT; ADULTS; BLOOD; SKIN; URINE; CALCIUM; MAGNESIUM; PHOSPHORUS; PROTEINS; DIETS; METABOLISM	Chu, J-Y. Margen, S. Costa, F.M. 1975 American Journal of Clinical Nutrition 28(9):1028-1035
7704 Urine	Ingestion	AAS	8	a) Not given b) Not given c) Not given d) Not given	a) 258 +or- 44 mg b) 248 +or- 52 mg c) 126 +or- 24 mg/g creatinine d) 121 +or- 29 mg/g creatinineug/day	a) Test diet, 812 mg Ca/day, 49.7 mg N/day b) Control diet, 817 mg Ca/day, 8.11 mg N/day c) Test diet d) Control diet No statistically significant effect on Ca metabolism in 20 day test period. Health students, 23.9 yr old, ht 179 cm, wt 76 kg, WI. URINE; ADULTS; CALCIUM; TIN; DIETS; METABOLISM	Johnson, N.A. Kroger, J.L. 1982 American Journal of Clinical Nutrition 35:855-860

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Calcium
7440-70-2
Ca
AtW 40.08, MP 850 C, BP 1440 C, VP 10 mm Hg at 982 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7705 Urine	Ingestion	AAS	17	a) 165-251 mg/day b) 100-183 mg/day c) Not given d) 150-164 mg/day e) 209-821 mg/day f) 23-126 mg/day	a) Not given b) Not given c) 201 mg/day d) Not given e) Not given f) Not given	a) 90-120 ml of antacids, and low Ca intake (230-285 mg/day). Fecal Ca 170-388 mg/day. Ca balance -145 to -206 mg/day b) Controls Low Ca intake (211-252 mg/day). Fecal Ca 110-226 mg/day. Ca balance -40 to -109 mg/day c) 90 ml antacid Maalox. Normal Ca intake (866 mg/day). Fecal Ca 649 mg/day. Ca balance 16 mg/day d) Controls. Normal Ca intake (851-855 mg/day). Fecal Ca 627-677 mg/day. Ca balance 14-74 mg/day e) 240 or 450 ml Maalox/day. Ca intake 225-346 mg/day. Fecal Ca 279-394 mg/day. Ca balance -231 to -502 mg/day f) Controls. Ca intake 185-253 mg/day. Fecal Ca 165-368 mg/day. Ca balance -22 to -177 mg/day Antacids caused increased fecal and decreased urinary P. 42-78 yr olds in metabolic research ward. ADULTS; URINE; CALCIUM; PHOSPHORUS; MINERAL METABOLISM	Spencer, H. Kramer, L. Norris, C. Osis, D. 1982 American Journal of Clinical Nutrition 36:32-40

Carbon monoxide
630-08-0
C-O
MW 28.01, MP -205 C, BP -191.5 C, VP 10 mm Hg at -215 C, 100 mm Hg at -205.7 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7706 Breath	Inhalation		12	a) Not given b) Not given c) Not given	a) 22.0 ppm b) 17.0 ppm c) 16.2 ppm	a) Regular cigarette, 1.1 mg nicotine, 12 mg CO, 14 mg tar b) Experimental, 0.53 mg nicotine, 4.0 mg CO, 4.8 mg tar c) Experimental, 1.1 mg nicotine, 4.1 mg CO, 5.8 mg tar Immediately after smoking Significant differences a),b) (p<0.001), a),c) (p<0.005), b),c) (p<0.05). No significant variation in daily cigarette consumption. 22-45 yr old healthy smokers, 18-35 cigarettes/day (mean 26.9), Sweden BLOOD; BREATH; SWEDEN; ADULTS; BLOOD PLASMA; DRUGS; CARBON INORGANIC COMPOUNDS; NICOTINE; INHALATION; SMOKING; TOBACCOS	Fagerstrom, K.-O. 1982 Psychopharmacology 77:164-167
7707 Breath	Inhalation		11	a) Not given b) Not given c) Not given d) Not given	a) 19.2 +or- 9.7 ppm b) 23.6 +or- 9.4 ppm c) 22.6 +or- 7.1 ppm d) 26.8 +or- 9.8 ppm	a) Before 1st cigarette following overnight abstinence from smoking b) After cigarette c) Before 2nd cigarette, 6-36 min after 1st cigarette d) After cigarette Smokers of 40 or more cigarettes/day, wt 73.6 +or- 11.2 kg BLOOD; BREATH; DRUGS; CARBON MONOXIDE; NICOTINE; INHALATION; SMOKING	Herning, R.I. Jones, R.T. Benowitz, N.L. Mines, A.H. 1983 Clinical Pharmacology and Therapeutics 33(1):84-90

Carboxyhemoglobin
9061-29-4
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7780 Blood	Inhalation	Spectrophotometry	a) 38 b) 32 c) 26	a) 0.64-2.4% b) 0.7-10.3% c) 6.5-13.9%	a) 1.7% b) 6.1% c) 8.8%	a) Non-smokers b) Cigarette smokers (15-40/day) c) Shoosha smokers (15-30 g Jurak/day) Samples within 0.5 hr after smoking for minimum of 15 min Differences between a),b),c) highly significant (p<0.001) Healthy 21-56 yr olds, Joddah, Saudi Arabia Shoosha smokers and cigarette smokers, respectively, reported headaches (50%,41%), blurred vision (50%,26%), palpitation (44%,22%), dizziness (44%,25%). SAUDI ARABIA; ADULTS; BLOOD; CARBON INORGANIC COMPOUNDS; INHALATION; SMOKING	Zahran, F. Yousef, A.A. Baig, M.M.A. 1982 American Journal of Public Health 72(7):722-724

Cesium
7440-46-2
Cs
AtW 132.9054, MP 28.5 C, BP 705 C, VP 1 mm Hg at 279 C, 10 mm Hg at 373 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7789 Milk	Ingestion	NA	21	a) 12.3-368.4 ng/g b) 1.1-3.0 ng/g	a) 73.5 +or- 5.9 ng/g b) 1.5 +or- 0.1 ng/g	a) Weekly samples, different foods on same day. 2-3 months beginning 15 days after childbirth, Latium b) Same conditions, samples from Castrovillari Healthy subjects, Latium and Castrovillare, Italy ITALY; ADULTS; MILK; IN VITRO ANALYSIS; LACTATION; ANTIMONY; CESIUM; CHROMIUM; COBALT; IRON; MERCURY; RUBIDIUM; SCANDIUM; SELENIUM; TRACE ELEMENTS; ZINC	Clemente, G.F. Ingrao, G. Santaroni, G.P. 1982 Science of the Total Environment 24:255-265

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Cesium
7440-46-2
Cs
AtW 132.9054, MP 28.5 C, BP 765 C, VP 1 mm Hg at 279 C, 10 mm Hg at 373 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7710 Pineal gland		NA		Not given	4.79x10(E-8) g/g dry wt	Autopsies 20-24 hr after death. Mean lower than means for 219 other areas of 7 brains. Levels constant over a wide range of fresh weights, not related to age, sex or body surface. Range estimated from graph. 2-85 yr olds males and females AUTOPSIES; PINEAL GLAND; BRAIN; COMPARATIVE EVALUATIONS; ANTIMONY; CESIUM; COBALT; IRON; RUBIDIUM; SELENIUM; ZINC	Dummel, W. Hock, A. Kasperek, K. Feinendegen, L.E. 1982 Science of the Total Environment 24:135-146

Chloride
16887-00-6
Cl
AtW 35.45

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7711 Blood, plasma	Ingestion	Chem Electrochem	14	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 109 +or- 3 mmol b) 106 +or- 2 mmol c) 103 +or- 2 mmol d) 99 +or- 3 mmol e) 105 +or- 2 mmol f) 106 +or- 1 mmol g) 102 +or- 3 mmol h) 103 +or- 1 mmol S.E.	a) Infants fed mothers' milk, start of study, 7 cases b) At 1 wk, 7 cases c) At 2 wk, 7 cases d) At 4 wk, 5 cases e) Infants fed formula, start of study, 6 cases f) At 1 wk, 6 cases g) At 2 wk, 6 cases h) At 4 wk (+ supplements NaHCO3, Ca-lactate), 5 cases Levels similar between groups during period of study. Premature infants, birth wt <1.3 kg, mean gestational age 20 wk, Canada PREMATURE INFANTS; CANADA; NUTRITIONAL DEFICIENCIES; BLOOD PLASMA; MILK; COMPARATIVE EVALUATIONS; CALCIUM; MAGNESIUM; MINERALS; PHOSPHORUS; POTASSIUM; SODIUM; FOODS; LACTATION	Atkinson, S.A. Radde, I.C. Anderson, G.H. 1983 Journal of Pediatrics 102(1):99-106

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Chloride
16887-00-6
Cl
AtW 35.85

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7712 Milk		Chem Electrochem	7	a) Not given b) Not given c) Not given	a) 10.9 +or- 2.20 mmol b) 14.0 +or- 1.10 mmol c) 12.8 +or- 1.16 mmol S.E.	a) 6-8 days postpartum b) 13-15 days postpartum c) 26-28 days postpartum Mothers of premature infants. Infant birth wt <1.5 kg, mean gestational age 28 wk, Canada PREMATURE INFANTS; CANADA; NUTRITIONAL DEFICIENCIES; BLOOD PLASMA; MILK; COMPARATIVE EVALUATIONS; CALCIUM; MAGNESIUM; MINERALS; PHOSPHORUS; POTASSIUM; SODIUM; FOODS; LACTATION	Atkinson, S.A. Bodde, I.C. Anderson, G.H. 1983 Journal of Pediatrics 102(1):99-106

Chromium
7440-47-3
Cr
AtW 51.996, MP 1900 C, BP 2642 C, VP 1 mm Hg at 1616 C, 10 mm Hg at 1840 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7713 Blood, cells	Dermal	AAS	1	a) Not applicable b) Not applicable	a) 0.43 ug/ml b) 0.15 ug/ml	a) 33 hr. Beginning of exchange transfusion b) 36 hr. End of exchange transfusion Time after accidental immersion to neck in Cr2(SO4)3, pH 2.83, 88 C. Death 47 hr after accident. 56 yr old white industrial worker Burns of variable thickness to 70% of skin of limbs, thorax, and abdomen, intravascular hemolysis, acute renal failure. UNITED KINGDOM; ADULTS; AUTOPSIES; CASE HISTORIES; METAL POISONING; BLOOD PLASMA; BONES; BRAIN; ERYTHROCYTES; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; SKIN; SPLEEN; URINE; CHROMIUM; METALS; INDUSTRIAL ACCIDENTS	Kelly, W.F. Ackrill, P. Day, J.P. O'Hare, M. Tye, C.T. Burton, I. Orton, C. Harris, M. 1982 British Journal of Industrial Medicine 39:397-400

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Chromium
7440-47-3
Cr
AtW 51.996, MP 1900 C, BP 2642 C, VP 1 mm Hg at 1616 C, 10 mm Hg at 1840 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7714 Blood, plasma	Dermal	AAS	1	a) Not applicable b) Not applicable c) Not applicable	a) 47 ug/ml b) 5.9 ug/ml c) 1.9 ug/ml	a) 5.5 hr b) 33 hr. Beginning of exchange transfusion c) 38 hr. End of exchange transfusion Time after accidental immersion to neck in Cr3(SO4)3, pH 2.38, 80 C. Death 47 hr after accident. 56 yr old white industrial worker Burns of variable thickness to 70% of skin of limbs, thorax, and abdomen, intravascular hemolysis, acute renal failure. UNITED KINGDOM; ADULTS; AUTOPSIES; CASE HISTORIES; METAL POISONING; BLOOD PLASMA; BONES; BRAIN; ERYTHROCYTES; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; SKIN; SPLEEN; URINE; CHROMIUM; METALS; INDUSTRIAL ACCIDENTS	Kelly, W.F. Ashrill, P. Day, J.P. O'Hara, H. Tye, C.T. Burton, I. Orton, C. Harris, H. 1982 British Journal of Industrial Medicine 39:397-400
7715 Blood, serum		NS, Isotope Dilution		Not given	0.000 ug/g	Demonstration of a sensitive, non-contaminating measurement technique HAIR; NAILS; MEASUREMENT METHODS; CHROMIUM; BLOOD SERUM	Dunstan, L.P. Garner, R.L. 1979 National Environmental Specimen Bank Research Program for Sampling, Storage, and Analysis, T.D. Gills, R.L. Koch, and R.A. Duret (Eds.), U.S. Environmental Protection Agency, Health Effects Research Laboratory, Research Triangle Park, NC, EPA-600/1-79-017, (pp. 98-131), 98 pp.

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Chromium
7440-47-3
Cr
AWT 51.996, MP 1900 C, BP 2642 C, VP 1 mm Hg at 1616 C, 10 mm Hg at 1840 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7716 Bone	Dermal	AAS	a) 1 b) 1	a) Not applicable b) Not applicable	a) 5.5 ug/g b) <0.05 ug/g	a) Victim of accidental immersion to neck in Cr2(SO4)3, pH 2.03, 80 C b) Control Autopsies 56 yr old white industrial worker who died 47 hr after exposure and unexposed patient who died same day Burns of variable thickness to 70% of skin of limbs, thorax, and abdomen, intravascular hemolysis, acute renal failure. UNITED KINGDOM; ADULTS; AUTOPSIES; CASE HISTORIES; METAL POISONING; BLOOD PLASMA; BONES; BRAIN; ERYTHROCYTES; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; SKIN; SPLEEN; URINE; CHROMIUM; METALS; INDUSTRIAL ACCIDENTS	Kelly, W.F. Ashrill, P. Day, J.P. O'Hare, M. Tye, C.T. Burton, I. Orton, C. Harris, H. 1982 British Journal of Industrial Medicine 39:397-400
7717 Brain	Dermal	AAS	a) 1 b) 1	a) Not applicable b) Not applicable	a) <0.05 ug/g b) <0.05 ug/g	a) Victim of accidental immersion to neck in Cr2(SO4)3, pH 2.03, 80 C b) Control Autopsies 56 yr old white industrial worker who died 47 hr after exposure and unexposed patient who died same day Burns of variable thickness to 70% of skin of limbs, thorax, and abdomen, intravascular hemolysis, acute renal failure. UNITED KINGDOM; ADULTS; AUTOPSIES; CASE HISTORIES; METAL POISONING; BLOOD PLASMA; BONES; BRAIN; ERYTHROCYTES; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; SKIN; SPLEEN; URINE; CHROMIUM; METALS; INDUSTRIAL ACCIDENTS	Kelly, W.F. Ashrill, P. Day, J.P. O'Hare, M. Tye, C.T. Burton, I. Orton, C. Harris, H. 1982 British Journal of Industrial Medicine 39:397-400

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Chromium
7440-47-3
Cr
AtW 51.996, MP 1900 C, BP 2642 C, VP 1 mm Hg at 1616 C, 10 mm Hg at 1840 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7718 Hair		NS, Isotope Dilution		Not given	2.65 ug/g	Demonstration of a sensitive, non-contaminating measurement technique HAIR; NAILS; MEASUREMENT METHODS; CHROMIUM; BLOOD SERUM	Dunston, L.P. Garner, H.L. 1979 National Environmental Specimen Bank Research Program for Sampling, Storage, and Analysis, T.E. Gills, H.L. Rook, and R.A. Duret (Eds.), U.S. Environmental Protection Agency, Health Effects Research Laboratory, Research Triangle Park, NC, EPA-600/1-79-017, (pp. 50-53), 58 pp.
7719 Hair						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, H.C. 1976 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 9th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).
7720 Heart	Dermal	AAS	a) 1 b) 1	a) Not applicable b) Not applicable	a) 1.5 ug/g b) 0.2 ug/g	a) Victim of accidental immersion to neck in Cr2(SO4)3, pH 2.83, 80 C b) Control Autopsies 36 yr old white industrial worker who died 67 hr after exposure and unexposed patient who died same day Burns of variable thickness to 70% of skin of limbs, thorax, and abdomen, intravascular hemolysis, acute renal failure. UNITED KINGDOM; ADULTS; AUTOPSIES; CASE HISTORIES; HUMAN POISONING; BLOOD PLASMA; BONES; BRAIN; ERYTHROCYTES; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; SKIN; SPLEEN; URINE; CHROMIUM; METALS; INDUSTRIAL ACCIDENTS	Kelly, W.F. Ashhill, P. Day, J.P. O'Hare, M. Tye, C.V. Burton, I. Orton, C. Harris, H. 1983 British Journal of Industrial Medicine 39:397-400

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Chromium
7440-47-3
Cr
AtW 51.996, MP 1900 C, BP 2642 C, VP 1 mm Hg at 1616 C, 10 mm Hg at 1840 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7721 Kidney	Dermal	AAS	a) 1 b) 1	a) Not applicable b) Not applicable	a) 16.0 ug/g b) 1.1 ug/g	a) Victim of accidental immersion to neck in Cr2(SO4)3, pH 2.83, 80 C b) Control Autopsies 56 yr old white industrial worker who died 47 hr after exposure and unexposed patient who died same day Burns of variable thickness to 70% of skin of limbs, thorax, and abdomen, intravascular hemolysis, acute renal failure. UNITED KINGDOM; ADULTS; AUTOPSIES; CASE HISTORIES; METAL POISONING; BLOOD PLASMA; BONES; BRAIN; ERYTHROCYTES; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; SKIN; SPLEEN; URINE; CHROMIUM; METALS; INDUSTRIAL ACCIDENTS	Kelly, W.F. Ackrill, P. Day, J.P. O'Hare, M. Tye, C.T. Burton, I. Orton, C. Harris, H. 1982 British Journal of Industrial Medicine 39:397-400
7722 Liver	Dermal	AAS	a) 1 b) 1	a) Not applicable b) Not applicable	a) 5.5 ug/g b) <0.05 ug/g	a) Victim of accidental immersion to neck in Cr2(SO4)3, pH 2.83, 80 C b) Control Autopsies 56 yr old white industrial worker who died 47 hr after exposure and unexposed patient who died same day Burns of variable thickness to 70% of skin of limbs, thorax, and abdomen, intravascular hemolysis, acute renal failure. UNITED KINGDOM; ADULTS; AUTOPSIES; CASE HISTORIES; METAL POISONING; BLOOD PLASMA; BONES; BRAIN; ERYTHROCYTES; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; SKIN; SPLEEN; URINE; CHROMIUM; METALS; INDUSTRIAL ACCIDENTS	Kelly, W.F. Ackrill, P. Day, J.P. O'Hare, M. Tye, C.T. Burton, I. Orton, C. Harris, H. 1982 British Journal of Industrial Medicine 39:397-400

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Chromium
7440-47-3
Cr
AW 51.996, MP 1900 C, BP 2642 C, VP 1 mm Hg at 1616 C, 10 mm Hg at 1840 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7723 Lung	Dermal	AAS	a) 1 b) 1	a) Not applicable b) Not applicable	a) 4.7 ug/g b) 0.3 ug/g	a) Victim of accidental immersion to neck in Cr2(SO4)3, pH 2.83, 60 C b) Control Autopsies 56 yr old white industrial worker who died 47 hr after exposure and unexposed patient who died same day Burns of variable thickness to 70% of skin of limbs, thorax, and abdomen, intravascular hemolysis, acute renal failure. UNITED KINGDOM; ADULTS; AUTOPSIES; CASE HISTORIES; NORMAL POPULATIONS; BLOOD PLASMA; BONES; BRAIN; ERYTHROCYTES; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; SKIN; SPLEEN; URINE; CHROMIUM; METALS; INDUSTRIAL ACCIDENTS	Kelly, M.F. Ashrill, P. Day, J.P. O'Hare, M. Tye, C.T. Burton, I. Orton, C. Harris, H. 1982 British Journal of Industrial Medicine 39:387-400
7724 Milk	Ingestion	NA	21	<or= 3.0-876 ng/g	Not given	Weekly samples, different foods on same day. 2-3 months beginning 15 days after childbirth. Mean calculated from samples with levels above detection limit Healthy subjects, Italy ITALY; ADULTS; MILK; IN VIVO ANALYSIS; LACTATION; ANTIMONY; CERIUM; CHROMIUM; COBALT; IRON; MERCURY; RUBIDIUM; SCANDIUM; TRACE ELEMENTS; ZINC	Clemente, G.F. Ingrao, G. Santaroni, G.P. 1982 Science of the Total Environment 24:255-269

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Chromium
7440-47-3
Cr
AtW 51.996, MP 1900 C, BP 2642 C, VP 1 mm Hg at 1616 C, 10 mm Hg at 1840 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7725 Muscle	Dermal	AAS	a) 1 b) 1	a) Not applicable b) Not applicable	a) 0.6 ug/g b) <0.05 ug/g	a) Victim of accidental immersion to neck in Cr2(SO4)3, pH 2.83, 80 C b) Control Autopsies 56 yr old white industrial worker who died 47 hr after exposure and unexposed patient who died same day Burns of variable thickness to 70% of skin of limbs, thorax, and abdomen, intravascular hemolysis, acute renal failure. UNITED KINGDOM; ADULTS; AUTOPSIES; CASE HISTORIES; METAL POISONING; BLOOD PLASMA; BONES; BRAIN; ERYTHROCYTES; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; SKIN; SPLEEN; URINE; CHROMIUM; METALS; INDUSTRIAL ACCIDENTS	Kelly, W.F. Ackrill, P. Day, J.P. O'Hara, M. Tye, C.T. Burton, I. Orton, C. Harris, H. 1982 British Journal of Industrial Medicine 39:397-400
7726 Nail		NS, Isotope Dilution		Not given	2.93 ug/g	Toenail. Demonstration of a sensitive and non-contaminating measurement technique. HAIR; NAILS; MEASUREMENT METHODS; CHROMIUM; BLOOD SERUM	Dunstan, L.P. Garner, R.L. 1979 National Environmental Specimen Bank Research Program for Sampling, Storage, and Analysis, T.H. Gills, N.L. Book, and R.A. Durst (Eds.), U.S. Environmental Protection Agency, Health Effects Research Laboratory, Research Triangle Park, NC, EPA-600/1-79-017, (pp. 50-53), 58 pp.

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Chromium
7440-47-3
Cr
AtW 51.996, MP 1900 C, BP 2642 C, VP 1 mm Hg at 1616 C, 10 mm Hg at 1840 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7727 Skin	Dermal	AAS	1	a) Not applicable b) Not applicable c) Not applicable	a) 726 ug/g b) 3.8 ug/g c) 1.8 ug/g	a) Severely burned area b) Slightly burned area c) Unburned area Immersion to neck in Cr2(SO4)3, pH 2.03, 80 C. Death 47 hr after accident. Autopsy within 20 hr 56 yr old white industrial worker Burns of variable thickness to 70% of skin of limbs, thorax, and abdomen, intravascular hemolysis, acute renal failure. UNITED KINGDOM; ADULTS; AUTOPSIES; CASE HISTORIES; NERVAL POISONING; BLOOD PLASMA; BONES; BRAIN; ERYTHROCYTES; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; SKIN; SPLEEN; URINE; CHROMIUM; METALS; INDUSTRIAL ACCIDENTS	Kelly, W.F. Ackrill, P. Day, J.P. O'Hare, M. Tye, C.T. Burton, I. Orton, C. Harris, H. 1982 British Journal of Industrial Medicine 39:397-400
7728 Spleen	Dermal	AAS	a) 1 b) 1	a) Not applicable b) Not applicable	a) 7.5 ug/g b) <0.05 ug/g	a) Victim of accidental immersion to neck in Cr2(SO4)3, pH 2.03, 80 C b) Control Autopsies 56 yr old white industrial worker who died 47 hr after exposure and unexposed patient who died same day Burns of variable thickness to 70% of skin of limbs, thorax, and abdomen, intravascular hemolysis, acute renal failure. UNITED KINGDOM; ADULTS; AUTOPSIES; CASE HISTORIES; NERVAL POISONING; BLOOD PLASMA; BONES; BRAIN; ERYTHROCYTES; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; SKIN; SPLEEN; URINE; CHROMIUM; METALS; INDUSTRIAL ACCIDENTS	Kelly, W.F. Ackrill, P. Day, J.P. O'Hare, M. Tye, C.T. Burton, I. Orton, C. Harris, H. 1982 British Journal of Industrial Medicine 39:397-400

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Chromium
7440-47-3
Cr
AEW 51.996, MP 1900 C, BP 2642 C, VP 1 mm Hg at 1616 C, 10 mm Hg at 1840 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7729 Urine	Dermal	AAS	1	a) Not applicable b) Not applicable	a) 10.5 mg b) <2 mg/24 hr	a) 1st 6 hr b) 7th hr to death Time after accidental immersion to neck in Cr(SO4)3, pH 2.83, 80 C. Death 47 hr after accident. 56 yr old white industrial worker Burns of variable thickness to 70% of skin of limbs, thorax, and abdomen, intravascular hemolysis, acute renal failure. UNITED KINGDOM; ADULTS; AUTOPSIES; CASE HISTORIES; METAL POISONING; BLOOD PLASMA; BONES; BRAIN; ERYTHROCYTES; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; SKIN; SPLEEN; URINE; CHROMIUM; METALS; INDUSTRIAL ACCIDENTS	Kelly, W.F. Ackrill, P. Day, J.P. O'Hara, H. Tye, C.T. Burton, I. Orton, C. Harris, H. 1982 British Journal of Industrial Medicine 39:397-400
7730 Urine	Ingestion	GC/ES AAS	76	a) 0.05-0.58 ng/ml b) 0.05-6.4 ng/ml c) 0.05-3.1 ng/ml d) 0.05-1.2 ng/ml e) 0.05-5.2 ng/ml f) 0.07-5.4 ng/ml	a) 0.20 +or- 0.01 ng/ml b) 1.02 +or- 0.12 ng/ml c) 1.13 +or- 0.08 ng/ml d) 0.32 +or- 0.02 ng/ml e) 1.14 +or- 0.12 ng/ml f) 1.30 +or- 0.11 ng/ml S.E.	a) Basal level b) After supplements for 2 mo c) After supplements for 3 mo d) Basal level, 90 min after glucose load e) Cr for 2 mo, 90 min after glucose load f) Cr for 3 mo, 90 min after glucose load 200 ug/day as chloride. Glucose load 1 g/kg body wt. Significant differences between basal and supplemented levels. Healthy volunteers, MD MARYLAND; ADULTS; URINE; MEASUREMENT METHODS; CHROMIUM; METALS	Anderson, R.A. Polansky, M.M. Bryden, N.A. Roginski, E.E. Patterson, K.Y. Veillon, C. Glinsmann, W. 1982 American Journal of Clinical Nutrition 36:1184-1193

Cobalt
7440-48-4
Co
AtW 58.9332, MP 1493 C, BP 3100 C, VP 1 mm Hg at 1910 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7731 Hair						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hopps, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).
7732 Milk	Ingestion	NA	21	a) <or= 0.1-36.4 ng/g b) 0.16-4.2 ng/g	a) 3.4 +or- 0.6 ng/g b) 0.97 +or- 0.2 ng/g	a) Weekly samples, different foods on same day. 2-3 months beginning 15 days after childbirth, Latium b) Same conditions, samples from Castrovillari Mean calculated from samples with levels above detection limit Healthy subjects, Latium and Castrovillari, Italy. ITALY; ADULTS; MILK; IN VITRO ANALYSIS; LACTATION; ANTIMONY; CESIUM; CADMIUM; COBALT; IRON; MERCURY; RUBIDIUM; SCANDIUM; SELENIUM; TRACE ELEMENTS; ZINC	Clemente, G.F. Ingrao, G. Santaroni, G.P. 1982 Science of the Total Environment 24:255-265
7733 Pineal gland		NA	97	0.1x10(E-8)-87.9x10(E-8) g/g dry wt	6.5x10(E-8) g/g dry wt	Autopsies 20-28 hr after death. Mean 1.43 fold higher than means for 257 other areas of 7 brains. Levels estimated from graph, constant over wide range of fresh weights, not related to age, sex or body surface. Negative correlation with Zn. 2-85 yr old males and females AUTOPSIES; PINEAL GLAND; BRAIN; COMPARATIVE EVALUATIONS; ANTIMONY; CESIUM; COBALT; IRON; RUBIDIUM; SELENIUM; ZINC	Hummel, U. Koch, A. Kasperek, K. Feinendegen, L.E. 1982 Science of the Total Environment 24:135-146

Copper
7440-50-8
Cu
AtW 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7730 Adipose		AAS	61	a) 0.16-1.05 ug/g (10th and 90th percentile) b) Not given c) Not given Dry wt	a) 0.37 ug/g (median) b) 0.58 +or- 0.13 ug/g c) 0.38 +or- 0.13 ug/g Dry wt	a) All cases b) Adult men c) Adult women Significant difference between b), c) (p<0.01). Autopsies with 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, H.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
7735 Aorta		AAS	55	a) 1.87-6.36 ug/g (10th and 90th percentile) b) Not given c) Not given Dry wt	a) 2.86 ug/g (median) b) 9.65 +or- 5.45 ug/g c) 2.80 +or- 0.76 ug/g Dry wt	a) All ages, 43 cases b) Infants c) Adults Significant difference between b), c) (p<0.001). Levels declined with age (Pearson correlation coefficient, r=-0.463, S=0.002). Autopsies within 24 hr. 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, H.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115

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Copper
7440-50-8
Cu
AtW 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1620 C, 10 mm Hg at 1870 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7736 Blood		AAS	23	0.10-0.80 mg/period	0.26 +or- 0.15 mg/period	Losses in menstrual blood Healthy 21-50 yr olds (mean 24.4 yr), controlled metabolic diet, some on oral contraceptives, Nebraska BLOOD; NEBRASKA; ORAL CONTRACEPTIVES; COPPER; HEMOGLOBINS; IRON; MAGNESIUM; ZINC; DIETS; MENSTRUATION	Umeren, J. Kies, C. 1982 Nutrition Reports International 26(4):717-726
7737 Blood						Review of requirements, metabolism, deficiency states, toxicity, effects of parenteral alimentation, genetically-determined abnormalities. ADULTS; CHILDREN; INFANTS; JUVENILES; BLOOD; SALIVA; SWEAT; REVIEW; COPPER; METALS; DIETS; METABOLISM; PREGNANCY	Mason, K.E. 1979 Journal of Nutrition 109(11):1981-2066
7738 Blood, plasma	Ingestion	AAS	9	a) Not given b) Not given c) Not given	a) 105 +or- 17 ug/100 ml b) 99 +or- 12 ug/100 ml c) 100 +or- 8 ug/100 ml	a) Cu 1.39 mg, Ca 780 mg, P 843 mg b) Cu 1.40 mg, Ca 780 mg, P 2442 mg c) Cu 1.50 mg, Ca 2382 mg, P 2443 mg Daily intake for 12 days. Fasting samples collected 2X during each experimental period. Range a)-c) 76-135 ug/100 ml. No significant effect of dietary treatments. College students, mean age 23.6 yr, ht 179 cm, wt 72 kg WISCONSIN; BLOOD PLASMA; BLOOD SERUM; URINE; COMPARATIVE EVALUATIONS; CALCIUM; COPPER; IRON; PHOSPHORUS; ZINC; DIETS	Snedeker, S.M. Smith, S.A. Greger, J.L. 1982 Journal of Nutrition 112:136-143
7739 Blood, plasma		AAS	10	a) Not given b) Not given c) Not given d) Not given	a) 1.083 +or- 0.079 ppm b) 0.990 +or- 0.075 ppm c) 1.063 +or- 0.122 ppm d) 1.153 +or- 0.152 ppm	a) Presupplementation, wk 1-5, 50 samples b) Supplementation, wk 6-10, 15 mg /d, 50 samples c) Postsupplementation, wk 12, 10 samples d) Postsupplementation, wk 15, 10 samples 10 subjects No significant differences Healthy 17-37 yr old students and faculty, Houston Baptist University, TX TEXAS; BLOOD PLASMA; HAIR; SALIVA; COPPER; ZINC; DIETS	Lane, E.W. Warren, D.C. Squyres, H.S. Cotham, A.C. 1982 Biological Trace Element Research 4:83-93

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Copper
7440-50-8
Cu
AtW 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7740 Blood, plasma			200	a) 1.19-2.23 ug/ml b) 1.66-2.08 ug/ml c) 1.22-1.86 ug/ml d) 1.13-2.08 ug/ml e) 1.13-2.23 ug/ml	a) 1.660 ug/ml b) 1.750 ug/ml c) 1.615 ug/ml d) 1.612 ug/ml e) 1.639 ug/ml	a) One Arm Point, 60 samples b) Loubodina, 19 cases c) Beagle Bay, 37 cases d) La Grange, 92 cases e) All locations, 200 cases Hypercupremia in 92% of samples 5-20 yr old aborigines, Northwest Australia and normal Caucasian children. AUSTRALIA; CHILDREN; NUTRITIONAL DEFICIENCIES; BLOOD PLASMA; HAIR; COPPER; IRON; ZINC; DIETS; DRINKING WATER	Cheah, B.B. Smith, E.M. Spargo, E.M. 1982 Clinical Applications of Recent Advances in Zinc Metabolism. Alan R. Liss, Inc., New York City, NY, (pp. 151-167).
7741 Blood, serum	Ingestion	AAS	0	a) Not given b) Not given c) 65-120 ug/dl	a) 87 +or- 21 ug/dl b) 96 +or- 16 ug/dl c) Not given	a) Intake 1.63 mg Cu and 68.67 mg Zn/day, 20 days b) Intake 1.63 mg Cu and 0.11 mg Zn/day, 20 days c) Range during a) and b) Sampled before breakfast on days 11 and 17. Difference not significant Healthy 21.0-30.0 yr olds, ht 168-192 cm, wt 69-82 kg WISCONSIN; ADULTS; BLOOD PLASMA; BLOOD SERUM; FECES; URINE; COMPARATIVE EVALUATIONS; COPPER; IRON; MAGNESIUM; MANGANESE; TIN; ZINC; DIETS; FOOD CONTAMINATION; METABOLISM; MINERAL METABOLISM	Johnson, M.A. Baier, M.J. Kroger, J.L. 1983 American Journal of Clinical Nutrition 35:1332-1338
7742 Blood, serum	Ingestion	MS		a) Not given b) Not given	a) 98 +or- 13 ug/dl b) 105 +or- 13 ug/dl	a) Prestudy. Ceruloplasmin 34 +or- 1.8 mg/dl b) End of study. Ceruloplasmin 36 +or- 3.1 mg/dl Cu absorption averaged 23.9% during first 6-wk lung study (9-19 g N/day) and 27.7% during second 6 wk period (0.8-5.7 g N/day). Daily Cu intake during both periods was 3.3 mg/day. Healthy 65-74 yr olds, wt 57-82 kg. ADULTS; AGE; COPPER; METALS; DIETS; MINERAL METABOLISM	Turnlund, J.R. Nichol, M.C. Keyes, W.R. Schutz, Y. Margen, S. 1983 American Journal of Clinical Nutrition 36:597-591

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Copper
7440-50-8
Cu
AtW 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7783 Bone		AAS	50	a) 1.03-3.57 ug/g (10th and 90th percentile) b) Not given c) Not given Dry wt	a) 2.09 ug/g (median) b) 3.24 +or- 0.67 ug/g c) 2.02 +or- 0.72 ug/g Dry wt	a) All cases b) Infants c) Adults Significant difference between b), c) (p<0.001). Autopsies within 24 hr. 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-76 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, R.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
7783 Cartilage		AAS	47	a) 0.66-4.04 ug/g (10th and 90th percentile) b) Not given c) Not given Dry wt	a) 2.47 ug/g (median) b) 2.36 +or- 0.47 ug/g c) 2.57 +or- 0.93 ug/g Dry wt	a) All cases b) Adult men c) Adult women Significant difference between b), c) (p<0.01). Levels increased with age (Pearson correlation coefficient, r=0.737, P=0.001). Autopsies within 24 hr. 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-76 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, R.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115

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Copper
7440-50-8
Cu
AtW 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1620 C, 10 mm Hg at 1870 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7745 Hair		X-ray spectrum	a) 1 b) 1 c) 1	a) 12.4-15.2 ug/g b) 9-34 ug/g c) 7-18 ug/g	a) Not given b) Not given c) Not given	a) 5 measurements at counting times of 300-5000 sec, 1 mm section of single hair, linear density 6.6 ug/mm b) 0-220 mm from cut end, Iraqi woman from one region c) 0-220 mm from cut end, individual from area of high fish consumption Estimated from graph (b), c)) CANADA; IRAQ; ADULTS; HAIR; MEASUREMENT METHODS; CALCIUM; COPPER; IRON; LEAD; MERCURY; ZINC; BIOACCUMULATION; DIETS; FISHES; FOOD CONTAMINATION	Toribara, T.Y. Jackson, D.A. French, W.R. Thompson, A.C. Jaklovic, J.M. 1982 Analytical Chemistry 54:1844-1849
7746 Hair						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hopps, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).
7747 Hair		AAS	45	8.24-24.8 ug/g dry wt 10th and 90th percentile	13.0 ug/g dry wt Median	Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, B.E. Robinson, H.F. 1982 Biological Trace Element Research 4:105-115

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Copper
;7440-50-8
Cu
AtW 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7760 Hair		NA	a) 51 b) 52	a) 8.5-17.9 ug/g b) 10.8-16.0 ug/g 25th-75th percentiles	a) 11.0 ug/g b) 12.1 ug/g Medians	a) Drank hard tapwater (mean hardness 330 ppm) at least 1 yr b) Drank soft tapwater (mean hardness 33 ppm) No significant difference Healthy Caucasian preschool children matched by age (4.5-5.5 yr old), sex, and socioeconomic status, Guelph, Ontario (hard water area) and Halifax, Nova Scotia (soft water area), Canada CANADA; AGE; CHILDREN; SEX; NUTRITIONAL DEFICIENCIES; HAIR; CALCIUM; COPPER; MANGANESE; ZINC; DRINKING WATER	Gibson, R.S. Anderson, B.M. Scythes, C.A. 1983 American Journal of Clinical Nutrition 37:37-42
7769 Hair		AAS	10	a) Not given b) Not given c) Not given d) Not given	a) 55.53 +or- 16.56 ppm b) 75.15 +or- 15.37 ppm c) 64.30 +or- 34.36 ppm d) 32.86 +or- 20.75 ppm	a) Presupplementation, wk 1-8, 80 samples b) Supplementation, wk 6-10, 15 mg/d, 50 samples c) Postsupplementation, wk 12, 10 samples d) Postsupplementation, wk 15, 10 samples 10 subjects Cu in hair varied slightly with Zn supplementation (p<0.10) Healthy 17-37 yr old students and faculty, Houston Baptist University, TX TEXAS; BLOOD PLASMA; HAIR; SALIVA; COPPER; ZINC; DIETS	Lane, H.W. Warren, B.C. Nguyen, H.E. Cotham, A.C. 1983 Biological Trace Element Research 6:83-93
7750 Heart		AAS	46	9.38-15.0 ug/g dry wt 10th and 90th percentile	12.3 ug/g dry wt Median	Autopsies within 24 hr 8 neonates (1-10 wk old), 3 infants (1-8 yr old), 46 adults (18-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; MERCURY; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, H.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-116

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Copper
7440-50-8
Cu
AEW 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7751 Kidney		ICP-AES	a) 42 b) 39	a) <1-8.6 mg/kg b) 1.1-7.1 mg/kg Wet wt	a) 2.2 mg/kg b) 2.1 mg/kg Wet wt Medians	a) Cortex b) Medulla Autopsies within 48 hr Normal adults, Great Lakes region, Ontario, Canada CANADA; ADULTS; AUTOPSIES; KIDNEYS; LIVER; MEASUREMENT METHODS; CADMIUM; CALCIUM; COPPER; IRON; MAGNESIUM; MANGANESE; PHOSPHORUS; POTASSIUM; SODIUM; ZINC	Subramanian, K.S. Meranger, J.C. 1982 Science of the Total Environment 24:147-157
7752 Kidney		AAS	55	a) 0.27-12.4 ug/g b) 5.47-8.45 ug/g 10th and 90th percentiles Dry wt	a) 10.1 ug/g b) 7.05 ug/g Medians Dry wt	a) Cortex, 46 samples b) Medulla, 45 samples Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, D.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
7753 Liver		ICP-AES	44	1.6-14.8 mg/kg wet wt	5.1 mg/kg wet wt Median	Autopsies within 48 hr Normal adults, Great Lakes region, Ontario, Canada CANADA; ADULTS; AUTOPSIES; KIDNEYS; LIVER; MEASUREMENT METHODS; CADMIUM; CALCIUM; COPPER; IRON; MAGNESIUM; MANGANESE; PHOSPHORUS; POTASSIUM; SODIUM; ZINC	Subramanian, K.S. Meranger, J.C. 1982 Science of the Total Environment 24:147-157

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Copper
7440-50-8
Cu
AtW 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7754 Liver						Review. Assessment of clinical use of laboratory determinations for metals, anticonvulsive agents, and cardiovascular drugs. ADULTS; AGE; CHILDREN; ANEMIA; BONE DISEASES; DISEASE; MENTAL RETARDATION; METAL POISONING; NUTRITIONAL DEFICIENCIES; SKIN DISEASE; BLOOD; BLOOD PLASMA; BLOOD SERUM; LIVER; URINE; ANTIARRHYTHMIC AGENTS; ANTICONVULSANTS; DIURETICS; DRUG THERAPY; DRUGS; HYPNOTICS; MUSCLE RELAXANTS; SEDATIVES; TRANQUILIZERS; REVIEW; COPPER; DIAZEPAM; IRON; LEAD; LITHIUM; THEOPHYLLINES; ZINC; PAINTS	Weiss, H.B. Rosenthal, I.M. 1978 Journal of Analytical Toxicology 2:168-171
7755 Liver		AAS	55	a) 12.6-109 ug/g (10th and 90th percentile) b) Not given c) Not given Dry wt	a) 23.4 ug/g (median) b) 232 +or- 197 ug/g c) 39.2 +or- 29.3 ug/g Dry wt	a) All ages, 53 cases b) Neonates c) Adults Significant difference between b), c) ($p<0.001$). Neonatal levels declined to adult levels by 1-8 yr. Autopsies within 24 hr. 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (16-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, R.H. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115

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Copper
7440-50-0
Cu
AEW 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7786 Liver		Spectrophotometry	6	708-2083 ug/g dry wt	1266 ug/g dry wt	White American siblings, died at 4.5-6 yr old of disease resembling Indian childhood cirrhosis New Jersey Progressive fatigue, low-grade fevers, abdominal distension, persistent epistaxis, epigastric pain, vomiting, icterus, clay-colored stools, diarrhea, dark brown urine, enlarged liver and spleen, death. Liver wt 840-1030 g. Capsular and cut surfaces irregular with fine nodules 1-5 mm diameter. Severe panlobular liver-cell swelling with Mallory body formation, prominent pericellular fibrosis, "micro-micronodular" cirrhosis, deposits of Cu and Cu-binding protein. NEW JERSEY; AUTOPSIES; CASE HISTORIES; CHILDREN; CIRRHOSIS; LIVER DISEASES; LIVER; COPPER	Lefkowitch, J.H. Haoig, C.L. King, H.B. Hegstrom, J.W.C. 1982 New England Journal of Medicine 307(5):271-277
7787 Lung		AAS	52	3.09-8.77 ug/g dry wt 10th and 90th percentile	4.97 ug/g dry wt Median	Autopsies within 24 hr 8 neonates (1-14 wk old), 3 infants (1-5 yr old), 40 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, D.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115

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Copper
7440-50-8
Cu
AGW 63.546, MP 1083 C, BP 2595 C. VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7758 Milk		AAS	23	0.11-0.56 ug/ml	0.27 +or- 0.13 ug/ml	15.8% in fat, 55.7% in proteins, 25.8% in low molecular wt fraction, 3.8% in large particles such as casein micelles. Samples collected at 2nd nursing of day. Level per ml increased with volume of milk expressed at a single nursing. Higher values found in early months of lactation Healthy mothers in various stages of lactation ADULTS; MILK; CALCIUM; COPPER; MAGNESIUM; MINERALS; TRACE ELEMENTS; ZINC; LACTATION	Franzson, G.-B. Lonnerdal, B. 1983 Journal of Pediatrics 101(4):504-508
7759 Milk		AAS	35	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.56 +or- 0.25 ug/ml b) 0.33 +or- 0.06 ug/ml c) 0.30 +or- 0.15 ug/ml d) 0.34 +or- 0.13 ug/ml e) 0.31 +or- 0.19 ug/ml f) 0.27 +or- 0.03 ug/ml	a) Colostrum milk, mothers of preterm infants (28-34 wk gestation) b) Transitional milk, mothers of preterm infants (28-34 wk gestation) c) Mature milk, mothers of preterm infants (28-34 wk gestation) d) Colostrum milk, mothers of term infants (37-41 wk gestation) e) Transitional milk, mothers of term infants (37-41 wk gestation) f) Mature milk, mothers of term infants (37-41 wk gestation) Maternity ward. Ibadan, Nigeria NIGERIA; ADULTS; NUTRITIONAL DEFICIENCIES; MILK; COMPARATIVE EVALUATIONS; COPPER; IRON; ZINC; PREGNANCY	Atinmo, T. Omololu, A. 1983 Early Human Development 8:308-313

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Copper
7440-50-8
Cu
AtW 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7760 Muscle		AAS	48	1.59-5.13 ug/g dry wt 10th and 90th percentile	3.00 ug/g dry wt Median	Skeletal muscle. Levels declined with age (Pearson correlation coefficient, r=-0.698, S=0.001). Autopsies within 24 hr. 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 48 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, H.H. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
7761 Pancreas		AAS	43	2.01-5.40 ug/g dry wt 10th and 90th percentile	3.70 ug/g dry wt Median	Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 48 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, H.H. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
7762 Saliva						Review of requirements, metabolism, deficiency, toxicity, effects of parenteral alimentation, genetically-determined abnormalities. ADULTS; CHILDREN; INFANTS; JUVENILES; BLOOD; SALIVA; SWEAT; REVIEW; COPPER; METALS; DIETS; METABOLISM; PREGNANCY	Hazen, H.H. 1979 Journal of Nutrition 109(11):1981-2066

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Copper
7440-50-0
Cu
Atw 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7763 Spleen		AAS	48	2.19-9.20 ug/g dry wt 10th and 90th percentile	2.91 ug/g dry wt Median	Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, D.H. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
7764 Sweat						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).
7765 Sweat						Review of requirements, metabolism, deficiency, toxicity, effects of parenteral alimentation, genetically-determined abnormalities. ADULTS; CHILDREN; INFANTS; JUVENILES; BLOOD; SALIVA; SWEAT; REVIEW; COPPER; METALS; DIETS; METABOLISM; PHARMACY	Mason, K.E. 1979 Journal of Nutrition 109(11):1901-2066

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Copper
7440-50-8
Cu
AtW 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7766 Urine	Ingestion	AAS	9	a) Not given b) Not given c) Not given	a) 51 +or- 8 ug/day b) 66 +or- 10 ug/day c) 67 +or- 7 ug/day	a) Daily intake: Cu 1.39 mg, Ca 780 mg, P 843 mg. Cu retention 0.66 +or- 0.10 mg/day b) Daily intake: Cu 1.40 mg, Ca 780 mg, P 2402 mg. Cu retention 0.68 +or- 0.14 mg/day c) Daily intake: Cu 1.90 mg, Ca 2302 mg, P 2403 mg. Cu retention 0.81 +or- 0.17 mg/day Composite samples for days 6-10 of 12-day period. b) and c) significantly different from a). Daily volume significantly correlated with Cu losses. College students, mean age 23.6 yr, ht 179 cm, wt 72 kg WISCONSIN; BLOOD PLASMA; BLOOD SERUM; URINE; COMPARATIVE EVALUATIONS; CALCIUM; COPPER; IRON; PHOSPHORUS; ZINC; DIETS	Sandstead, H.H. Smith, K.A. Gregor, J.L. 1982 Journal of Nutrition 112:136-143
7767 Urine	Ingestion	AAS	8	a) Not given b) Not given	a) 0.84 +or- 0.01 mg/day b) 0.84 +or- 0.01 mg/day	a) Intake 1.63 mg Cu and 49.67 mg Zn/day, 20 days b) Intake 1.63 mg Cu and 0.11 mg Zn/day, 20 days Combined urinary/fecal losses indicate apparent retention of 0.30 mg/day for a) and 0.33 mg/day for b) Difference not significant Healthy 21.0-38.0 yr olds, ht 168-192 cm, wt 69-82 kg WISCONSIN; ADULTS; BLOOD PLASMA; BLOOD SERUM; FECES; URINE; COMPARATIVE EVALUATIONS; COPPER; IRON; MAGNESIUM; MANGANESE; TIN; ZINC; DIETS; FOOD CONTAMINATION; METABOLISM; MINERAL METABOLISM	Johnson, M.A. Baier, M.J. Gregor, J.L. 1982 American Journal of Clinical Nutrition 35:1332-1338

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Copper
7440-50-8
Cu
ACN 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7768 Urine	Ingestion		a) 1 b) 1	a) 175-40 ug/24 hr b) 95-30 ug/24 hr	a) Not given b) Not given	a) Dose, 5 mg/kg dimercaprol, IM, every 4 hr following ingestion, total 4 doses. 25 mg/kg D-penicillamine every 6 hr (beginning at 16 hr), oral, for 5 days b) Dose, 50 mg dimercaprol, IM, 4 hr following ingestion and 3 doses of 5 mg/kg every 4 hr. 250 mg D-penicillamine every 6 hr (beginning at 16 hr), oral, for 5 days 4 and 10 days following ingestion of unknown amount of rat poison containing As trioxide. Estimated from graph a) 4.5 yr old, 10 kg b) 4.75 yr old, 16.7 kg Navajo Indians CHELATES; COLORADO; CASE HISTORIES; CHILDREN; INFANTS; BLOOD; URINE; ARSENIC; COPPER; ZINC	Peterson, R.G. Rumack, B.H. 1977 Journal of Pediatrics 91(4):661-666
7769 Urine						Review. Assessment of clinical use of laboratory determinations for metals, anticonvulsive agents, and cardiovascular drugs. ADULTS; AGE; CHILDREN; ANEMIA; BONE DISEASES; DISEASES; MENTAL RETARDATION; METAL POISONING; NUTRITIONAL DEFICIENCIES; SKIN DISEASES; BLOOD; BLOOD PLASMA; BLOOD SERUM; LIVER; URINE; ANTIARRHYTHMIC AGENTS; ANTICONVULSANTS; DIURETICS; DRUG THERAPY; DRUGS; HYPNOTICS; MUSCLE RELAXANTS; SEDATIVES; TRANQUILIZERS; REVIEW; COPPER; DIAZEPAMS; IRON; LEAD; LITHIUM; THEOPHYLLINES; ZINC; PAINTS	Baine, R.D. Rosenthal, I.M. 1978 Journal of Analytical Toxicology 2:166-171
7770 Urine		AAS	a) 13 b) 15	a) 10.1-80 ug/g creatinine b) 10.7-200 ug/g creatinine	a) Not given b) Not given	a) Inhabitants of non-polluted area b) Inhabitants of Cd-polluted area Levels correlated with urinary metallothionein (r=0.82, p=0.001). Estimated from graph. Japanese women >50 yr old, no known occupational exposure to heavy metals. JAPAN; KIDNEY DISEASES; URINE; CADMIUM; COPPER; METALS	Tohyama, C. Shaikh, Z.A. Nogawa, K. Kobayashi, E. Honda, R. 1982 Archives of Toxicology 50:159-166

Coumarin, 3-(alpha-acetonylbenzyl)-4-hydroxy- (8 CI)
2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)- (9 CI)
81-81-2
C19-H16-O4
MW 308.32, MW 161 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7771 Milk						Review. General pharmacological principles associated with excretion of drugs and chemicals in human milk. PENNSYLVANIA; UNITED STATES; ADULTS; INFANTS; MILK; SALIVA; URINE; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTICHOLINERGICS; ANTIPYRETICS; DIURETICS; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; CAFFEINE; NICOTINE; PESTICIDES; SODIUM; THEOPHYLLINES; ALCOHOLIC BEVERAGES; LACTATION; METABOLISM; METABOLITES; TOBACCOS	Berlin, C.M., Jr. 1981 Obstetrics and Gynecology 58(5)(supplement):17S-23S

Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3alpha,4beta,5beta,6beta)-
6108-10-7
C6-H6-Cl6
MW 290.85

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7772 Semen		GC		0.001-0.010 ug/g	0.005 ug/g	Mean of 50 samples, 62% positive Random samples of fertile and infertile men, Poland POLAND; SEMEN; CHLORINATED HYDROCARBONS; DDE; HEXACHLOROCYCLOHEXANE; HEXACHLOROBENZENE; LINDANE; PESTICIDES; METABOLITES; PESTICIDE RESIDUES; POPULATION EXPOSURE	Szymczynski, S.A. Waliszewski, S.M. 1981 International Journal of Andrology 4:669-674

Cyclohexane, 1,2,3,4,5,6-hexachloro-, alpha- (8 CI)
Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5beta,6beta)- (8 CI)
319-84-6
C6-H6-C16
MW 290.83, MP 158.5-160 C, BP 288 C, VP 0.02 mm Hg at 20 C

TISSUE	EXPOSURE SOURCE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7773 Adipose		GC TLC MS	99	a) 0.001-0.063 ug/g b) Not given c) Not given d) Not given e) Not given f) Not given Wet wt	a) 0.004 +or- 0.000 ug/g b) 0.005 +or- 0.000 ug/g c) 0.004 +or- 0.000 ug/g d) 0.005 +or- 0.000 ug/g e) 0.000 +or- 0.000 ug/g f) 0.004 +or- 0.000 ug/g Wet wt	a) 99 samples, 97% containing residues b) 53 samples, males c) 45 samples, females d) 0-25 yr olds, 33 samples e) 26-50 yr olds, 61 samples f) >50 yr olds 24 samples Autopsies, accident victims, Canada, 1976 CANADA; ADULHE; AGE; AUTOPSIES; CHILDREN; SEX; ADIPOSE TISSUE; CHLORINATED HYDROCARBONS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LINDANE; ENDACHLOR; CHYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE	Mes, J. Davies, D.J. Turton, D. 1982 Bulletin of Environmental Contamination and Toxicology 28:97-104
7774 Milk		GC	4	Not given	<0.01 ug/g	Extractable lipid 4 of 15 samples positive 16-30 yr olds with infants 1-30 days old. Urban and rural areas, medium and low income levels, March 1976, Comarca, Mexico MEXICO; ADULHE; MILK; CHLORIN ORGANIC COMPOUNDS; DDE; DDT; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; PESTICIDES; BIOACCUMULATION; LACTATION; METABOLITES; PESTICIDE RESIDUES; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Albert, L. Vega, F. Portales, A. 1981 Pesticides Monitoring Journal 15(3):130-139
7775 Semen		GC		0.001-0.006 ug/g	0.002 ug/g	Mean of 50 samples, 62% positive Random samples of fertile and infertile men, Poland POLAND; SEMEN; CHLORINATED HYDROCARBONS; DDE; HEXACHLOROCYCLOHEXANE; HEXACHLOROBENZENE; LINDANE; PESTICIDES; METABOLITES; PESTICIDE RESIDUES; POPULATION EXPOSURE	Szymczynski, S.A. Wolinowski, S.E. 1981 International Journal of Andrology 4:669-674

Cyclohexane, 1,2,3,4,5,6-hexachloro-, beta- (8 CI)
Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2beta,3alpha,4beta,5alpha,6beta)- (8 CI)
319-85-7
C6-H6-Cl6
MW 290.83, MP 310-315 C (sublimes), BP 60 C at 0.50 mm Hg, VP 0.005 mm Hg at 20 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7776 Adipose		GC TLC MS	99	a) 0.016-4.013 ug/g b) Not given c) Not given d) Not given e) Not given f) Not given Wet wt	a) 0.151 +or- 0.650 ug/g b) 0.183 +or- 0.612 ug/g c) 0.116 +or- 0.166 ug/g d) 0.067 +or- 0.051 ug/g e) 0.260 +or- 0.698 ug/g f) 0.082 +or- 0.037 ug/g Wet wt	a) 99 samples, all containing residues b) 53 samples, males c) 45 samples, females d) 0-25 yr olds, 33 samples e) 26-50 yr olds, 41 samples f) >50 yr olds, 24 samples Autopsies, accident victims, Canada, 1976 CANADA; ADULTS; AGE; AUTOPSIES; CHILDREN; SEX; ADIPOSE TISSUE; CHLORINATED HYDROCARBONS; DDE; HCT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LINDANE; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE	Mes, J. Davies, D.J. Turton, D. 1982 Bulletin of Environmental Contamination and Toxicology 28:97-104
7777 Milk		GC TLC	15	a) 0.06-3.58 ug/g b) 0.007-0.100 ug/ml	a) 1.63 +or- 0.94 ug/g b) 0.030 +or - 0.026 ug/ml	a) Extractable lipid b) Whole milk All samples tested contained >0.01 ug/g extractable lipid 16-30 yrs old with infants 1-30 days old. Urban and rural areas, medium and low income levels, March 1976, Comarca, Mexico MEXICO; ADULTS; MILK; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; HCT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; PESTICIDES; BIOACCUMULATION; LACTATION; METABOLITES; PESTICIDE RESIDUES; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Albert, L. Vega, P. Portales, A. 1981 Pesticides Monitoring Journal 15(3):125-130
7778 Milk		GC-EC	10	Not given	1.73 +or- 1.34 ppm	Fat milk basis Samples from maternity hospitals, Tokyo metropolitan area, Sept.-Nov. 1980, Japan JAPAN; ADULTS; MILK; MEASUREMENT METHODS; DDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; INSECTICIDES; NONACHLOR; OXYCHLORDANE; PESTICIDES; LACTATION; PESTICIDE RESIDUES	Hiyoshi, T. 1982 Bulletin of Environmental Contamination and Toxicology 28:946-948

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Cyclohexane, 1,2,3,4,5,6-hexachloro-, beta- (8 CI)
Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2beta,3alpha,4beta,5alpha,6beta)- (9 CI)
319-85-7
C6-H6-Cl6
MW 290.83, MP 314-315 C (sublimes), BP 60 C at 0.50 mm Hg, VP 0.005 mm Hg at 20 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7779 Semen		GC		0.001-0.005 ug/g	0.002 ug/g	Mean of 50 samples, 8% positive Random samples of fertile and infertile men, Poland POLAND; SEMEN; CHLORINATED HYDROCARBONS; DDE; HEXACHLOROCYCLOHEXANE; HEXACHLOROBENZENE; LINDANE; PESTICIDES; HEPTACHLOR; PESTICIDE RESIDUES; POPULATION EXPOSURE	Szymczynski, S.A. Waliszewski, S.M. 1991 International Journal of Andrology 4:669-674

Cyclohexane, 1,2,3,4,5,6-hexachloro-, delta- (8 CI)
Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3alpha,4beta,5alpha,6beta)- (9 CI)
319-86-8
C6-H6-Cl6
MW 290.83, MP 141.5-142.0 C, BP 60 C at 0.34 mm Hg, VP 0.02 mm Hg at 20 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7780 Semen		GC		0.001-0.020 ug/g	0.004 ug/g	Mean of 50 samples, 72% positive Random samples of fertile and infertile men, Poland POLAND; SEMEN; CHLORINATED HYDROCARBONS; DDE; HEXACHLOROCYCLOHEXANE; HEXACHLOROBENZENE; LINDANE; PESTICIDES; HEPTACHLOR; PESTICIDE RESIDUES; POPULATION EXPOSURE	Szymczynski, S.A. Waliszewski, S.M. 1991 International Journal of Andrology 4:669-674

Cyclohexane, 1,2,3,4,5,6-hexachloro-, gamma- (8 CI)
Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)- (9 CI)
58-89-9
C6-H6-C16
MW 290.85, MP gamma-isomer crystals 112.5 C, BP 323.4 C, 176.2 C at 10 mm Hg, VP 0.14 mm Hg at 60 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7781 Adipose		GC TLC RS	99	a) 0.001-0.030 ug/g b) Not given c) Not given d) Not given e) Not given f) Not given Wet wt	a) 0.003 +or- 0.000 ug/g b) 0.003 +or- 0.000 ug/g c) 0.003 +or- 0.000 ug/g d) 0.002 +or- 0.000 ug/g e) 0.003 +or- 0.000 ug/g f) 0.004 +or- 0.000 ug/g Wet wt	a) 99 samples, 98% containing residues b) 53 samples, males c) 46 samples, females d) 0-25 yr olds, 33 samples e) 26-50 yr olds, 41 samples f) >50 yr olds, 24 samples Autopsies, accident victims, Canada, 1978 CANADA; ADULTS; AGE; AUTOPSIES; CHILDREN; SEX; ADIPOSE TISSUE; CHLORINATED HYDROCARBONS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROCYCLOHEXANE; LINDANE; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE	Mes, J. Davies, D.J. Turton, D. 1982 Bulletin of Environmental Contamination and Toxicology 28:97-104
7781 Blood, serum		GC	a) 7 b) 8 c) 9 d) 7	a) Not given b) Not given c) Not given d) Not given	a) 7.97 +or- 6.51 ppb b) 6.02 +or- 6.48 ppb c) 8.48 +or- 7.84 ppb d) 4.94 +or- 6.57 ppb	a) Controls, normal 2nd trimester pregnancies, no missed abortions b) Low serum PCB, recent missed abortions (mean 1.62) c) High serum PCB, recent missed abortions (mean 1.58) d) Former missed abortions (mean 3.03) In missed abortions, products of conception were retained in utero at least 6 wk after fetal death, which occurred before week 20 of gestation. Women with missed abortions (mean age 28.1 yr for high PCB group) and controls (mean age 26.7 yr) ADULTS; BLOOD SERUM; CHLORINE ORGANIC COMPOUNDS; DDE; DDS; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; PREGNANCY	Barcovici, B. Wassermann, M. Cucos, S. Ron, M. Wassermann, D. Pines, A. 1983 Environmental Research 30:168-174

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Cyclohexane, 1,2,3,4,5,6-hexachloro-, gamma- (8 CI)
Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)- (9 CI)
58-89-9
C6-H6-Cl6
MW 290.85, MP gamma-isomer crystals 112.5 C, BP 323.4 C, 176.2 C at 10 mm Hg, VP 0.14 mm Hg at 40 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7783 Blood, serum		CC GC	27	a) Not given b) Not given c) Not given d) Not given	a) 4.3 +or- 4.8 ppb b) 15.0 +or- 7.2 ppb c) 11.0 +or- 7.4 ppb d) 22.1 +or- 5.7 ppb	a) Normal 3rd-trimester pregnancies, 19 cases b) Premature deliveries, 17 cases c) 12 cases from b), total DDT <100 ppb d) 5 cases from b), total DDT >100 ppb Significant differences betwen a) and b), d) (p<0.01), a), and c) (p<0.05) BLOOD SERUM; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; METABOLITES; PESTICIDE RESIDUES; PREGNANCY	Wassermann, M. Ron, M. Bercovici, B. Wassermann, D. Cucos, S. Pinos, A. 1982 Environmental Research 28:106-112
7784 Milk		GC-EC	20	0.001-0.043 ppm	0.019 +or- 0.012 ppm	Samples in April-July 1981 Lactating mothers, Madrid, Spain SPAIN; MILK; COMPARATIVE EVALUATIONS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; MERCURY; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; LACTATION; PESTICIDE RESIDUES	Baluja, G. Hernandez, L.M. Gonzalez, M.J. Rico, M.C. 1982 Bulletin of Environmental Contamination and Toxicology 28:573-577
7785 Semen		GC		0.001-0.026 ug/g	0.003 ug/g	Mean of 50 samples, 785 positive Random samples of fertile and infertile men, Poland POLAND; SEMEN; CHLORINATED HYDROCARBONS; DDE; HEXACHLOROCYCLOHEXANE; HEXACHLOROBENZENE; LINDANE; PESTICIDES; METABOLITES; PESTICIDE RESIDUES; POPULATION EXPOSURE	Szymczynski, G.A. Waliszewski, S.M. 1981 International Journal of Andrology 4:669-674

DDT, total (No postings in CHEMLINE).
50-29-3
C14-H9-Cl5
MW 354.50

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7786 Adipose		GC	1	Not applicable	630.5 mg/kg	Serum level 2,020.5 ng/ml Resident of Triana, AL living downstream from defunct DDT-manufacturing plant ALABAMA; ADOLESCENTS; ADULTS; CHILDREN; INFANTS; BLOOD SERUM; COMPARATIVE EVALUATIONS; DDT; INDUSTRIAL PLANTS; METABOLITES; PESTICIDES	Kreiss, K. Zack, M.M. Kimbrough, R.D. Needham, L.L. Smrek, A.L. Jones, B.T. 1981 Journal of the American Medical Association 245(19):1926-1930
7787 Adipose			300	a) Not given b) Not given c) Not given d) Not given	a) 6.4 mg/kg b) 5.9 mg/kg c) 5.3 mg/kg d) 7.9 mg/kg	a) 1968-69 b) 1971-73 c) 1973-74 d) 1974-75 Renal fat 25-60 yr olds, from White, Indian, and Black populations, South Africa SOUTH AFRICA; ADULTS; ADIPOSE TISSUE; [illegible]; REVIEW; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; PESTICIDES; TISSUES; FOODS; PESTICIDE RESIDUES	Van Dyk, L.P. Wiese, I.H. Hollen, J.B.C. 1982 Residue Reviews 82:30-124
7788 Blood, serum		GC	a) 7 b) 8 c) 9 d) 7	a) Not given b) Not given c) Not given d) Not given	a) 35.51 +or- 18.88 ppb b) 37.90 +or- 18.24 ppb c) 88.22 +or- 11.79 ppb d) 61.11 +or- 47.01 ppb	a) Controls, normal 2nd trimester pregnancies, no missed abortions b) Low serum PCB, recent missed abortions (mean 1.62) c) High serum PCB, recent missed abortions (mean 1.50) d) Former missed abortions (mean 3.63) In missed abortions, products of conception were retained in utero at least 6 wk after fetal death, which occurred before week 20 of gestation. Women with missed abortions (mean age 28.1 yr for high PCB group) and controls (mean age 24.7 yr) ADULTS; BLOOD SERUM; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; PREGNANCY	Dorcovici, B. Wassermann, M. Cucos, S. Ron, M. Wassermann, D. Pinos, A. 1983 Environmental Research 30:169-176

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DDT, total (No postings in CHEMLINE).
50-29-3
C14-H9-Cl5
MW 354.50

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7789 Milk		GC	133	a) 5.0-100.4 ppb b) 500-3550 ppb c) 6.1-68.0 ppb d) 250-2010 ppb e) 3.7-106.7 ppb f) 140-4900 ppb g) 2.9-90.7 ppb h) 120-6300 ppb i) 5.7-84.3 ppb j) 210-3270 ppb k) 3.1-114.0 ppb l) 260-3500 ppb m) 9.9-72.6 ppb n) 640-3530 ppb	a) 33.3 +or- 25.5 ppb b) 1650 +or- 860 ppb c) 23.6 +or- 18.6 ppb d) 1050 +or- 480 ppb e) 28.4 +or- 26.5 ppb f) 1520 +or- 1260 ppb g) 26.4 +or- 21.4 ppb h) 1830 +or- 1340 ppb i) 32.3 +or- 20.9 ppb j) 1390 +or- 660 ppb k) 36.4 +or- 35.7 ppb l) 1480 +or- 960 ppb m) 30.4 +or- 16.9 ppb n) 1320 +or- 770 ppb	a) Milk, 30 women from Lillehammer, mean age 27.5 yr, mean days post partum 6.7 b) Milk extractable fat, group a) c) Milk, 19 women from Oslo, mean age 28.5 yr, mean days post partum 130 d) Milk extractable fat, group c) e) Milk, 19-20 women from Kristiansand, mean age 24.1 yr, mean days post partum 5.2 f) Milk extractable fat, group e) g) Milk, 20 women from Porsgrunn, mean age 25.3 yr, mean days post partum 6.6 h) Milk extractable fat, group g) i) Milk, 19 women from Tromso, mean age 25.6 yr, mean days post partum 5.2 j) Milk extractable fat, group i) k) Milk, 17 women from Trondheim, mean age 24.6 yr, mean days post partum 6.9 l) Milk extractable fat, group k) m) Milk, 20 women from Bergen, mean age 23.0 yr, mean days post partum 5.0 n) Milk extractable fat, group m) Significant differences Norway, 7 cities in different areas, varying degrees of industrialization No threat to infants' health HUMAN; ADULTS; MILK; DDE; DDT; HEXACHLOROBENZENE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; INDUSTRIAL AREAS; LACTATION; METABOLITES; PESTICIDE RESIDUES; POPULATION EXPOSURE; URBAN AREAS	Skaare, J.U. 1981 Acta Pharmacologica et Toxicologica 49:384-389

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DDT, total (No postings in CHEMLINE).
50-29-3
C14-H9-Cl5
MW 354.50

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7780 Milk		GC	15	a) 1.51-63.86 ug/g b) 0.020-1.190 ug/ml	a) 13.10 +or- 13.30 ug/g b) 0.266 +or- 0.348 ug/ml	a) Extractable lipid b) Whole milk Total equivalent DDT calculated by adding DDT + 1.115 DDE + 1.11 TDE Only samples containing >0.01 ug/g extractable lipid included in calculations 16-30 yr olds with infants 1-29 days old. Urban and rural areas, medium and low income levels, March 1976, Comarca, Mexico MEXICO; ADULTS; MILK; CHLORINE ORGANIC COMPOUNDS; DBD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; PESTICIDES; BIOACCUMULATION; LACTATION; METABOLITES; PESTICIDE RESIDUES; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Albert, L. Vega, P. Portales, A. 1981 Pesticides Monitoring Journal 15(3):135-138

Digitoxin (8 CI)
Card-20(22)-enolide, 3-((O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-2,6-dideoxy-beta-D-ribo-hexopyranosyl)oxy)-14-hydroxy-, (3beta,5beta)- (8 CI)
71-63-6
C41-H64-O13
MW 764.92, MP 256-257 C (anhydrous)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7791 Blood, serum						Review. Usefulness of serum levels of cardiac drugs in clinical practice. BLOOD SERUM; ANESTHETICS; ANTIARRHYTHMIC AGENTS; ANTIHYPERTENSIVE AGENTS; DIURETICS; DRUGS; STIMULANTS; REVIEW	Pennock, B.E. 1978 American Family Physician 17(4):194-196

Dimethylamine, N-nitroso- (8 CI)
Methanamine, N-methyl-N-nitroso- (8 CI)
62-75-9
C2-H6-N2-O
MW 74.1, BP 152 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7702 Blood, plasma	Ingestion	GC		a) 0-9.0 ng/ml b) 0-12.5 ng/ml c) 0.5-2.7 ng/ml d) 0.4-0.8 ng/ml e) ND-1.2 ng/ml f) ND-1.0 ng/ml h) 0.3-0.6 ng/ml i) 0.3-0.7 ng/ml j) 0.3-0.5 ng/ml k) ND-0.5 ng/ml l) ND-0.6 ng/ml m) ND-0.4 ng/ml ND=not detected	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given m) Not given	a) Fasting b) 90 min after meal of fish, spinach and vegetable juice (same subjects as in a)) c) 150 min after b) d) Fasting (6 subjects) e) 1 hr after meal of cod, spinach and vegetable juice (same subjects as in d)) f) 1 hr after e) h) Fasting (5 subjects) i) 1 hr after meal of bacon, spinach and vegetable juice (same subjects as in h)) j) 1 hr after i) k) Fasting (5 subjects) l) 1 hr after meal of beef, spinach and vegetable juice (same subjects as in k)) m) 1 hr after l) No significant differences. a)-c) estimated from graph. Data also on levels in ingested food and gastric aspirate Healthy 19-60 yr olds ADULTS; BLOOD PLASMA; URINE; NITROSAMINES; DIETS; FOODS	Lakritz, L. Gatos, H.A. Dugger, A.M. Wasserman, A.E. 1982 Food and Chemical Toxicology 20:455-459

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Dimethylamine, N-nitroso- (8 CI)
Methanamine, N-methyl-N-nitroso- (9 CI)
62-75-9
C2-H6-N2-O
MW 74.1, BP 152 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7793 Urine	Ingestion	GC		a) 0-0.2 ng/ml b) 0-3.8 ng/ml c) 0-0 ng/ml d) 0.2 ng/ml e) ND-0.2 ng/ml f) ND-0.1 ng/ml g) ND-0.4 ng/ml h) ND-0.1 ng/ml i) ND-0.3 ng/ml j) ND-0.7 ng/ml k) ND-0.1 ng/ml l) ND-0.3 ng/ml ND-not detected	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given	a) Fasting (10 subjects) b) 90 min after meal of fish, spinach and vegetable juice (same subjects as in a)) c) 60 min after b) d) 90 min after c), (one sample) e) Fasting (6 subjects) f) 1 hr after meal of cod, spinach and vegetable juice (same subjects as in e)) g) Fasting (5 subjects) h) 1 hr after meal of bacon, spinach and vegetable juice (same subjects as in g)) i) 1 hr after h) j) Fasting (5 subjects) k) 1 hr after meal of beef, spinach and vegetable juice (same subjects as in j) l) 1 hr after k) No significant differences. a)-c) estimated from graph Healthy 19-40 yr olds ADULTS; BLOOD PLASMA; URINE; NITROSAMINES; DIETS; FOODS	Lakritz, L. Gates, R.A. Gupper, A.H. Wasserman, A.E. 1982 Food and Chemical Toxicology 20:455-459

Ethanaminium, 2-hydroxy-N,N,N-trimethyl-
62-49-7
C5-H14-N-O
MW 104.18

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7794 Milk		Enzymatic	66	a) 0-100 nmol/ml b) 100-200 nmol/ml c) 200-300 nmol/ml d) >300 nmol/ml	a) Not given b) Not given c) Not given d) Not given	a) 40% of Ecuadoreans, 0% of controls b) 27% of Ecuadoreans, 27% of controls c) 27% of Ecuadoreans, 18% of controls d) 6% of Ecuadoreans, 55% of controls All donors lactating more than 30 days. Ecuadoreans on maize-based diet low in choline. 55 residents of highland Ecuador and controls, 11 residents of Boston, MA ECUADOR; MASSACHUSETTS; SOUTH AMERICA; UNITED STATES; ADULTS; NUTRITIONAL DEFICIENCIES; MILK; COMPARATIVE EVALUATIONS; VITAMINS; DIETS; LACTATION	Zeisel, S.H. Stanbury, J.B. Wurtman, R.J. Brigida, M. Pierre-Benitez, R. 1982 New England Journal of Medicine 306(3):175-176

Ethane, 1,1-dichloro-2-(o-chlorophenyl)-2-(p-chlorophenyl)- (8 CI)
Benzene, 1-chloro-2-(2,2-dichloro-1-(4-chlorophenyl)ethyl)- (9 CI)
53-19-0
C14-H10-C14
MW 320.05, MP 76-78 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7795 Blood, serum		GC	a) 7 b) 8 c) 9 d) 7	a) Not given b) Not given c) Not given d) Not given	a) 3.21 +or- 3.38 ppb b) 3.32 +or- 3.40 ppb c) 5.36 +or- 3.97 ppb d) 8.46 +or- 9.57 ppb	a) Controls, normal 2nd trimester pregnancies, no missed abortions b) Low serum PCB, recent missed abortions (mean 1.62) c) High serum PCB, recent missed abortions (mean 1.50) d) Former missed abortions (mean 3.43) In missed abortions, products of conception were retained in utero at least 6 wk after fetal death, which occurred before week 20 of gestation. Women with missed abortions (mean age 28.1 yr for high PCB group) and controls (mean age 24.7 yr) ADULTS; BLOOD SERUM; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; PREGNANCY	Bercovici, B. Wassermann, M. Cucos, S. Ron, M. Wassermann, D. Pines, A. 1983 Environmental Research 30:169-174

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Ethane, 1,1-dichloro-2-(o-chlorophenyl)-2-(p-chlorophenyl)- (8 CI)
Benzene, 1-chloro-2-(2,2-dichloro-1-(4-chlorophenyl)ethyl)- (9 CI)
53-19-0
C14-H10-C14
MW 320.05, MP 76-78 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7796 Blood, serum		CC GC	27	a) Not given b) Not given c) Not given d) Not given	a) 3.3 +or- 3.9 ppb b) 10.1 +or- 8.8 ppb c) 6.1 +or- 6.0 ppb d) 19.7 +or- 6.7 ppb	a) Normal 3rd-trimester pregnancies, 10 cases b) Premature deliveries, 17 cases c) 12 cases from b), total DDT <100 ppb d) 5 cases from b), total DDT >110 ppb Significant differences between a), b) (p<0.02) and a), d) (p<0.01) BLOOD SERUM; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; METABOLITES; PESTICIDE RESIDUES; PREGNANCY	Wassermann, M. Ron, M. Bercovici, B. Wassermann, D. Cucos, S. Pines, A. 1982 Environmental Research 28:106-112

Ethane, 1,1-dichloro-2,2-bis(p-chlorphenyl)- (8 CI)
Benzene, 1,1'-(2,2-dichloroethylidene)bis(4-chloro- (9 CI)
72-54-8
C14-H10-C14
MW 350.46, MP 221-222 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7797 Blood, serum		GC	a) 7 b) 8 c) 9 d) 7	a) Not given b) Not given c) Not given d) Not given	a) 5.01 +or- 2.18 ppb b) 6.16 +or- 4.28 ppb c) 6.96 +or- 4.00 ppb d) 4.51 +or- 3.43 ppb	a) Controls, normal 2nd trimester pregnancies, no missed abortions b) Low serum PCB, recent missed abortions (mean 1.62) c) High serum PCB, recent missed abortions (mean 1.50) d) Former missed abortions (mean 3.43) In missed abortions, products of conception were retained in utero at least 6 wk after fetal death, which occured before week 20 of gestation. Women with missed abortions (mean age 28.1 yr for high PCB group) and controls (mean age 26.7 yr) ADULTS; BLOOD SERUM; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; PREGNANCY	Bercovici, B. Wassermann, M. Cucos, S. Ron, M. Wassermann, D. Pines, A. 1983 Environmental Research 30:169-176

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Ethane, 1,1-dichloro-2,2-bis(p-chlorphenyl)- (8 CI)
Benzene, 1,1'-(2,2-dichloroethylidene)bis(4-chloro- (9 CI)
72-54-8
C14-H10-C14
MW 350.46, MP 221-222 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7798 Blood, serum		CC GC	37	a) Not given b) Not given c) Not given d) Not given	a) 3.3 +or- 2.2 ppb b) 3.2 +or- 3.2 ppb c) 2.6 +or- 3.0 ppb d) 4.8 +or- 3.5 ppb	a) Normal 3rd-trimester pregnancies, 18 cases b) Premature deliveries, 17 cases c) 12 cases from b), total DDT <100 ppb d) 5 cases from b), total DDT >100 ppb No significant differences BLOOD SERUM; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; METABOLITES; PESTICIDE RESIDUES; PREGNANCY	Wassermann, M. Ron, M. Bercovici, B. Wassermann, D. Cucos, S. Planz, A. 1982 Environmental Research 28:106-112
7799 Milk		GC	5	a) <0.01-1.06 ug/g b) Trace - 0.043 ug/ml	a) 0.56 +or- 0.37 ug/g b) 0.015 +or- 0.016 ug/ml	a) Extractable lipid b) Whole milk 10 samples not included contained <0.01 ug/g extractable lipid 16-30 yr olds with infants 1-29 days old. Urban and rural areas, medium and low income levels, March 1976, Comarca, Mexico MEXICO; ADULTS; MILK; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; PESTICIDES; BIOACCUMULATION; LACTATION; METABOLITES; PESTICIDE RESIDUES; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Albert, L. Vega, F. Portales, A. 1981 Pesticides Monitoring Journal 15(3):135-138
7800 Milk		GC-EC	20	0-0.000 ppm	0.003 +or- 0.002 ppm	Samples in April-July 1981. Mean based on 50% of samples with residues >or= 0.001 ug/g Lactating mothers, Madrid, Spain SPAIN; MILK; COMPARATIVE EVALUATIONS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; MERCURY; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; LACTATION; PESTICIDE RESIDUES	Baluja, G. Hernandez, L.M. Gonzalez, M.J. Rico, M.C. 1983 Bulletin of Environmental Contamination and Toxicology 30:573-577

Ethane, 1,1,1-trichloro-
71-55-6
C2-H3-Cl3
MW 133.42, MP -30.41 C, BP 74.1 C, VP 100 mm Hg at 20 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7001 Breath	Inhalation	GC	2-8	2.9-9.0 ppm	Not given	Avecolar samples from 8-12 AM one day after 8 hr exposure to 203-236 ppm. Levels adjusted to normal PCO2 of 5.1 kPa (38 mm Hg) to correct for hyper- and hypoventilation. Measurements in total expired air can also be corrected for Bohr dead air space to given avecolar levels. Range attributed to different retention and ventilation rates. Healthy 21-47 yr olds, wt 58-80 kg. BREATH; MEASUREMENT METHODS; CHLORINATED HYDROCARBONS; INHALATION; INDUSTRIAL CHEMICALS; SOLVENTS	Guillemin, M. Cuberan, E. 1982 British Journal of Industrial Medicine 39:161-168

Ethane, 1,1,1-trichloro-2-(o-chlorophenyl)-2-(p-chlorophenyl)- (8 CI)
Benzene, 1-chloro-2-(2,2,2-trichloro-1-(4-chlorophenyl)ethyl)- (9 CI)
789-02-6
C14-H9-Cl5
MW 354.49, MP 74-74.5 C (cor)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7803 Adipose		GC TLC MS	99	a) 0.005-0.570 ug/g b) Not given c) Not given d) Not given e) Not given f) Not given Wet wt	a) 0.032 +or- 0.050 ug/g b) 0.039 +or- 0.070 ug/g c) 0.025 +or- 0.017 ug/g d) 0.036 +or- 0.090 ug/g e) 0.029 +or- 0.017 ug/g f) 0.034 +or- 0.026 ug/g Wet wt	a) 99 samples, 96% containing residues b) 53 samples, males c) 45 samples, females d) 0-25 yr olds, 33 samples e) 26-50 yr olds, 61 samples f) >50 yr olds, 24 samples Autopsies, accident victims, Canada, 1976 CANADA; ADULTS; AGE; AUTOPSIES; CHILDREN; SEX; ADIPOSE TISSUE; CHLORINATED HYDROCARBONS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LINDANE; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE	Mes, J. Davies, D.J. Turton, D. 1982 Bulletin of Environmental Contamination and Toxicology 28:97-104

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Ethane, 1,1,1-trichloro-2-(o-chlorophenyl)-2-(p-chlorophenyl)- (8 CI)
Benzene, 1-chloro-2-(2,2,2-trichloro-1-(4-chlorophenyl)ethyl)- (9 CI)
789-02-6
C14-H9-Cl5
MW 354.49, BP 74-74.5 C (cor)

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7803 Blood, serum		GC	a) 7 b) 8 c) 9 d) 7	a) Not given b) Not given c) Not given d) Not given	a) 4.67 +or- 4.44 ppb b) 6.25 +or- 4.84 ppb c) 7.03 +or- 4.68 ppb d) 16.36 +or- 11.30 ppb	a) Controls, normal 2nd trimester pregnancies, no missed abortions b) Low serum PCB, recent missed abortions (mean 1.62) c) High serum PCB, recent missed abortions (mean 1.56) d) Former missed abortions (mean 3.43) Significantly different, a) and d) ($p<0.025$) In missed abortions, products of conception were retained in utero at least 6 wk after fetal death, which occurred before week 20 of gestation. Women with missed abortions (mean age 30.1 yr for high PCB group) and controls (mean age 24.7 yr) ADULT; BLOOD SERUM; CHLORIN ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; PREGNANCY	Barcovici, B. Wassermann, M. Cucos, S. Ron, M. Wassermann, D. Pines, A. 1983 Environmental Research 30:169-176
7804 Blood, serum		CC GC	27	a) Not given b) Not given c) Not given d) Not given	a) 3.8 +or- 3.5 ppb b) 11.8 +or- 7.7 ppb c) 8.4 +or- 5.5 ppb d) 20.8 +or- 6.2 ppb	a) Normal 3rd-trimester pregnancies, 10 cases b) Premature deliveries, 17 cases c) 12 cases from b), total DDT <100 ppb d) 5 cases from b), total DDT >100 ppb Significant differences between a) and b), c), d) ($p<0.01$) BLOOD SERUM; CHLORIN ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; METABOLITES; PESTICIDE RESIDUES; PREGNANCY	Wassermann, M. Ron, M. Barcovici, B. Wassermann, D. Cucos, S. Pines, A. 1983 Environmental Research 28:106-112

Ethane, 1,1,1-trichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(2,2,2-trichloroethylidene)bis(4-chloro- (9 CI)
50-29-3
C14-H9-Cl5
MW 354.5%, MP 108.5-109 C, BP 260 C, VP 1.5X10(E-7) mm Hg at 20 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7805 Adipose		GC TLC NS	99	a) 0.016-3.938 ug/g b) Not given c) Not given d) Not given e) Not given f) Not given Wet wt	a) 0.311 +or- 0.493 ug/g b) 0.355 +or- 0.614 ug/g c) 0.266 +or- 0.300 ug/g d) 0.195 +or- 0.339 ug/g e) 0.412 +or- 0.661 ug/g f) 0.301 +or- 0.276 ug/g Wet wt	a) 99 samples, all containing residues b) 53 samples, males c) 45 samples, females d) 0-25 yr olds, 33 samples e) 26-50 yr olds, 41 samples f) >50 yr olds, 24 samples Autopsies, accident victims, Canada, 1976 CANADA; ADULTS; AGE; AUTOPSIES; CHILDREN; SEX; ADIPOSE TISSUE; CHLORINATED HYDROCARBONS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LINDANE; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE	Nes, J. Davies, D.J. Turton, D. 1982 Bulletin of Environmental Contamination and Toxicology 28:97-104
7806 Blood, serum		GC	a) 7 b) 8 c) 9 d) 7	a) Not given b) Not given c) Not given d) Not given	a) 4.93 +or- 2.76 ppb b) 3.94 +or- 1.76 ppb c) 5.78 +or- 5.15 ppb d) 9.86 +or- 6.91 ppb	a) Controls, normal 2nd trimester pregnancies, no missed abortions b) Lov serum PCB, recent missed abortions (mean 1.62) c) High serum PCB, recent missed abortions (mean 1.50) d) Former missed abortions (mean 3.43) In missed abortions, products of conception were retained in utero at least 6 wk after fetal death which occurred before week 20 of gestation. Women with missed abortions (mean age 28.1 yr for high PCB group) and controls (mean age 24.7 yr) ADULTS; BLOOD SERUM; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; PREGNANCY	Barcovici, B. Wassermann, M. Cucos, S. Ron, M. Wassermann, D. Pines, A. 1983 Environmental Research 30:169-174

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Ethane, 1,1,1-trichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(2,2,2-trichloroethylidene)bis(4-chloro- (9 CI)
50-29-3
C14-H9-Cl5
MW 354.50, MP 108.5-109 C, BP 260 C, VP 1.5X10(E-7) mm Hg at 20 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7887 Blood, serum		GC	a) 7 b) 8 c) 9 d) 7	a) Not given b) Not given c) Not given d) Not given	a) 26.43 +or- 12.50 ppb b) 25.06 +or- 9.67 ppb c) 28.22 +or- 17.30 ppb d) 31.18 +or- 23.84 ppb	a) Controls, normal 2nd trimester pregnancies, no missed abortions b) Low serum PCB, recent missed abortions (mean 1.62) c) High serum PCB, recent missed abortions (mean 1.56) d) Former missed abortions (mean 3.43) In missed abortions, products of conception were retained in utero at least 6 wk after fetal death, which occurred before week 20 of gestation. Women with missed abortions (mean age 28.1 yr for high PCB group) and controls (mean age 24.7 yr) ADULTS; BLOOD SERUM; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; PREGNANCY	Sercovici, B. Wassermann, M. Cucos, S. Ben, H. Wassermann, D. Pines, A. 1983 Environmental Research 30:169-174
7888 Blood, serum		CC GC	27	a) Not given b) Not given c) Not given d) Not given	a) 2.9 +or- 3.0 ppb b) 12.9 +or- 10.0 ppb c) 7.9 +or- 4.6 ppb d) 24.9 +or- 10.0 ppb	a) Normal 3rdtrimester pregnancies, 10 cases b) Premature deliveries, 17 cases c) 12 cases from b), total DDT <100 ppb d) 5 cases from b), total DDT >100 ppb Significant differences between a) and c), d) (P<0.01) BLOOD SERUM; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; METABOLITES; PESTICIDE RESIDUES; PREGNANCY	Wassermann, M. Ben, H. Sercovici, B. Wassermann, D. Cucos, S. Pines, A. 1983 Environmental Research 30:106-113

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Ethane, 1,1,1-trichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(2,2,2-trichloroethylidene)bis(4-chloro- (9 CI)
50-29-3
C14-H9-Cl5
MW 354.50, MP 108.5-109 C, BP 260 C, VP 1.5X10(E-7) mm Hg at 20 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7809 Milk		GC Chem TLC	11	a) <0.01-6.04 ug/g b) Trace-0.263 ug/ml	a) 1.98 +or- 1.70 ug/g b) 0.049 +or- 0.073 ug/ml	a) Extractable lipid b) Whole milk 4 samples not included contained <0.01 ug/g extractable lipid 16-30 yr olds with infants 1-29 days old. Urban and rural areas, medium and low income levels, March 1976, Comarca, Mexico MEXICO; ADULTS; MILK; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; PESTICIDES; BIOACCUMULATION; LACTATION; METABOLITES; PESTICIDE RESIDUES; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Albert, L. Vega, F. Portales, A. 1981 Pesticides Monitoring Journal 15(3):135-138
7810 Milk						Review. Breast milk contamination by chlorinated hydrocarbon insecticides and industrial pollutants, U.S. and Canada. CALIFORNIA; CANADA; DISTRICT OF COLUMBIA; MICHIGAN; MISSISSIPPI; TENNESSEE; TEXAS; UNITED STATES; AGE; INFANTS; RACIAL STUDIES; MILK; REVIEW; ALDRIN; DDE; DDT; DIELDRIN; CHLORINATED HYDROCARBONS; HEPTACHLOR EPOXIDE; HEPTACHLOROCYCLOHEXANE; HEXACHLOROBENZENE; INSECTICIDES; LINDANE; OXYCHLORDANE; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; DIETS; FARMS; FOOD CONTAMINATION; FOODS; LACTATION; METABOLITES; RURAL AREAS; SMOKING; URBAN AREAS	Calabrese, E.J. 1982 Journal of the American College of Toxicology 1(3):91-98
7811 Milk		GC-EC	20	0.027-0.15 ppm	0.083 +or- 0.038 ppm	Samples in April-July 1981 Lactating mothers, Madrid, Spain SPAIN; MILK; COMPARATIVE EVALUATIONS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; MERCURY; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; LACTATION; PESTICIDE RESIDUES	Beluje, G. Hernandez, L.M. Gonzalez, M.J. Rico, M.C. 1982 Bulletin of Environmental Contamination and Toxicology 28:573-577

Ethanethiol, 2-amino-
60-23-1
C2-H7-N-S
MW 77.15, MP 97-98.5 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7012 Blood, plasma	Ingestion		6	a) 37-10 uM b) 38-6 uM c) 28-15 uM d) 54-18 uM e) 14-<5 uM f) <5 uM	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 1 and 6 hr after 3.21 mmol/kg b) 1 and 6 hr after 0.18 mmol/kg c) 1 and 6 hr after 0.17 mmol/kg d) 1 and 6 hr after 0.23 mmol/kg e) 1 and 6 hr after 0.14 mmol/kg f) Controls, 0 dose 13 mo-9 yr olds, nephropathic cystinosis CHILDREN; KIDNEY DISEASES; BLOOD PLASMA; URINE; DRUG THERAPY; COMPARATIVE EVALUATIONS	Jonas, A.J. Schneider, J.A. 1982 Journal of Pediatrics 100(2):321-323
7013 Urine	Ingestion		5	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0% of dose b) 1.2% of dose c) 1.7% of dose d) 0.3% of dose e) 1.7% of dose	After 0 mmol/24 hr, controls b) After 6.6 mmol/24 hr c) After 7.6 mmol/24 hr d) After 15.0 mmol/24 hr e) After 5.3 mmol/24 hr 13 mo-9 yr olds, nephropathic cystinosis CHILDREN; KIDNEY DISEASES; BLOOD PLASMA; URINE; DRUG THERAPY; COMPARATIVE EVALUATIONS	Jonas, A.J. Schneider, J.A. 1982 Journal of Pediatrics 100(2):321-323

Ethanol, 2,2,2-trichloro-
115-20-8
C2-H3-Cl3-O
MW 149.42, MP 18 C, BP 151-153 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7014 Blood			24	a) 0.2-4.0 mg/l b) 0.1-1.1 mg/l	a) 1.5 mg/l b) 0.5 mg/l	a) Trichloroethanol b) Trichloroethylene (parent compound) 19-55 yr old (mean 34.8 yr) workers occupationally exposed to trichloroethylene 1 mo-35 yr (mean 7 yr) GERMANY; ADULTS; BLOOD; URINE; INDUSTRIAL MEDICINE; INDUSTRIAL ATMOSPHERES; METABOLITES; INDUSTRIAL CHEMICALS	Triebig, G. Trautner, F. Weltle, H. Saure, H. Valentin, H. 1982 International Archives of Occupational and Environmental Health 51:25-34

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Ethanol, 2,2,2-trichloro-
115-20-8
C2-H3-Cl3-O
MW 149.42, MP 18 C, BP 151-153 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7815 Urine			24	a) 19.0-357.0 mg/g creatinine b) 3.0-201.0 mg/g creatinine c) 31.0-416.0 mg/g creatinine	90.0 mg/g creatinine Median	Occupationally exposed to trichloroethylene 19-55 yr olds (mean 36.8 yr) exposed 1 mo-35 yr (mean 7 yr) GERMANY; ADULTS; BLOOD; URINE; INDUSTRIAL MEDICINE; INDUSTRIAL ATMOSPHERES; METABOLITES; INDUSTRIAL CHEMICALS	Triebig, G. Trautner, P. Weltle, D. Saure, H. Valentin, H. 1982 International Archives of Occupational and Environmental Health 51:25-34

Ethylene, trichloro- (8 CI)
Ethene, trichloro- (9 CI)
79-01-6
C2-H-Cl3
MW 131.40, MP 73 C, BP 87.1 C, VP 100 mm Hg at 32 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7816 Blood	Inhalation	GC	4	2-0.03 mg/l	Not applicable	Levels at 15 min and 10 hr after 100 ppm in air for 4 hr. Range of means Healthy 20-21 yr olds, average wt 61.6 kg, Japan. JAPAN; ADULTS; BLOOD; URINE; BREATH; CHLORINATED HYDROCARBONS; INDUSTRIAL CHEMICALS; SOLVENTS	Sato, A. Nakajima, T. Fujiwara, Y. Murayama, M. 1977 British Journal of Industrial Medicine 34:56-63
7817 Blood			24	a) 0.1-1.1 mg/l b) 0.2-4.0 mg/l c) 5.5-52.5 mg/l	a) 0.5 mg/l b) 1.5 mg/l c) 17.5 mg/l	a) Trichloroethylene b) Trichloroethanol (metabolite) c) Trichloroacetic acid (metabolite) 19-55 yr old (mean 36.8 yr) workers occupationally exposed to trichloroethylene 1 mo-35 yr (mean 7 yr) GERMANY; ADULTS; BLOOD; URINE; INDUSTRIAL MEDICINE; INDUSTRIAL ATMOSPHERES; METABOLITES; INDUSTRIAL CHEMICALS	Triebig, G. Trautner, P. Weltle, D. Saure, H. Valentin, H. 1982 International Archives of Occupational and Environmental Health 51:25-34

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Ethylene, trichloro- (8 CI)
Ethene, trichloro- (9 CI)
79-01-6
C2-H-Cl3
MW 131.40, MP 73 C, BP 87.1 C, VP 100 mm Hg at 32 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7818 Breath	Inhalation	GC	4	0.3-0.003 mg/l	Not applicable	Levels at 15 min and 10 hr after 100 ppm in air for 4 hr. Range of means Healthy 20-21 yr olds, average wt 61.6 kg, Japan. JAPAN; ADULTS; BLOOD; URINE; BREATH; CHLORINATED HYDROCARBONS; INDUSTRIAL CHEMICALS; SOLVENTS	Sato, A. Nakajima, T. Fujiwara, Y. Murayama, M. 1977 British Journal of Industrial Medicine 34:56-63
7819 Urine	Inhalation	GC	4	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) 180 mg b) 175 mg c) 5 mg d) 365 mg e) 295 mg f) 60 mg	a) Total trichloro-compounds b) Trichloroethanol c) Trichloroacetic acid d) Total trichlorocompounds e) Trichloroethanol f) Trichloroacetic acid 20 hr (a)-c)) and 172 hr (d)-f)) after 4 hr exposure to 100 ppm trichloroethylene in air. Healthy 20-21 yr olds, average wt 61.6 kg, Japan. JAPAN; ADULTS; BLOOD; URINE; BREATH; CHLORINATED HYDROCARBONS; INDUSTRIAL CHEMICALS; SOLVENTS	Sato, A. Nakajima, T. Fujiwara, Y. Murayama, M. 1977 British Journal of Industrial Medicine 34:56-63

Ethylene, 1,1-dichloro-2-(o-chlorophenyl)-2-(p-chlorophenyl)- (8 CI)
Benzene, 1-chloro-2-(2,2-dichloro-1-(4-chlorophenyl)ethenyl)- (9 CI)
3424-82-6
C14-H8-Cl4
MW 318.03

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7820 Blood, serum		GC	a) 7 b) 8 c) 9 d) 7	a) Not given b) Not given c) Not given d) Not given	a) 1.93 +or- 1.46 ppb b) 2.64 +or- 1.97 ppb c) 2.79 +or- 2.26 ppb d) 3.73 +or- 4.76 ppb	a) Controls, normal 2nd trimester pregnancies, no missed abortions b) Low serum PCB, recent missed abortions (mean 1.62) c) High serum PCB, recent missed abortions (mean 1.50) d) Former missed abortions (mean 3.43) In missed abortions, products of conception were retained in utero at least 6 wk after fetal death, which occurred before week 20 of gestation. Women with missed abortions (mean age 28.1 yr for high PCB group) and controls (mean age 24.7 yr) ADULTS; BLOOD SERUM; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; PREGNANCY	Bercovici, B. Wassermann, M. Cucos, S. Ron, M. Wassermann, D. Pines, A. 1983 Environmental Research 30:169-174
7821 Blood, serum		CC GC	27	a) Not given b) Not given c) Not given d) Not given	a) 1.2 +or- 2.2 ppb b) 10.1 +or- 6.3 ppb c) 7.4 +or- 5.0 ppb d) 16.6 +or- 4.3 ppb	a) Normal 3rd-trimester pregnancies, 10 cases b) Premature deliveries, 17 cases c) 12 cases from b), total DDT <100 ppb d) 5 cases from b), total DDT >100 ppb Significant differences between a) and b), c), d) ($p<0.01$) BLOOD SERUM; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; METABOLITES; PESTICIDE RESIDUES; PREGNANCY	Wassermann, M. Ron, M. Bercovici, B. Wassermann, D. Cucos, S. Pines, A. 1982 Environmental Research 28:106-112

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7822 Adipose		GC TLC MS	99	a) 0.036-7.819 ug/g b) Not given c) Not given d) Not given e) Not given f) Not given Wet wt	a) 1.721 +or- 1.390 ug/g b) 1.726 +or- 1.497 ug/g c) 1.726 +or- 1.286 ug/g d) 1.052 +or- 1.292 ug/g e) 2.024 +or- 1.318 ug/g f) 2.139 +or- 1.377 ug/g Wet wt	a) 99 samples, all containing residues b) 53 samples, males c) 45 samples, females d) 0-25 yr olds, 33 samples e) 26-50 yr olds, 41 samples f) >50 yr olds, 24 samples Significant increase in levels with age (P<0.05) Autopsies, accident victims, Canada, 1976 CANADA; ADULTS; AGE; AUTOPSIES; CHILDREN; SEX; ADIPOSE TISSUE; CHLORINATED HYDROCARBONS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LINDANE; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE	Mes, J. Davies, D.J. Turton, D. 1982 Bulletin of Environmental Contamination and Toxicology 28:97-104
7823 Adipose		GC	a) 32 b) 29	a) 0.2-9.5 ppm b) 0.3-7.5 ppm	a) 3.1 ppm b) 2.0 ppm	a) Males b) Females Levels similar to those observed in other populations Workers in electrical capacitor manufacture, 1976 ADIPOSE TISSUE; BLOOD PLASMA; DDE; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; INDUSTRIAL ATMOSPHERES; INDUSTRIAL PLANTS; INDUSTRIES; OCCUPATIONAL HAZARDS; INDUSTRIAL CHEMICALS	Wolff, M.S. Fischbein, A. Thornton, J. Rice, C. Lilis, R. Selikoff, I.J. 1982 International Archives of Occupational and Environmental Health 49:199-206

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Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 310.03, MP 88.4 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7024 Adipose		GC	114	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 5.46 +or- 6.43 ppm b) 3.39 +or- 3.75 ppm c) 4.32 +or- 4.18 ppm d) 4.68 +or- 4.62 ppm e) 6.16 +or- 6.03 ppm f) 4.08 +or- 3.86 ppm g) 5.02 +or- 4.84 ppm h) 3.48 +or- 3.07 ppm	a) 51 cancer patients b) 63 noncancer patients c) 58 urban residents d) 56 rural residents e) 13 farmers f) 101 nonfarmers g) 62 men h) 52 women Autopsies. Levels not correlated with residence, occupation, sex, age, wt. Association between PCB and DDE levels in subcutaneous abdominal adipose and incidence of cancer Deceased cancer and non-cancer patients, median wt 57 and 64 kg respectively, 1978-1980, Denmark DENMARK; ADULTS; AGE; AUTOPSIES; SEX; NEOPLASMS; ADIPOSE TISSUE; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FARMS; METABOLITES; OCCUPATIONAL HAZARDS; RURAL AREAS; SMOKING; URBAN AREAS	Unger, M. Olsen, J. Clausen, J. 1982 Environmental Research 29:371-376
7025 Blood, plasma		GC	a) 156 b) 143	a) 1-115 ppb b) 1-34 ppb	a) 11 ppb b) 9 ppb	a) Males b) Females Levels similar to those observed in other populations Workers in electrical capacitor manufacture, 1976 ADIPOSE TISSUE; BLOOD PLASMA; DDE; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; INDUSTRIAL ATMOSPHERES; INDUSTRIAL PLANTS; INDUSTRIES; OCCUPATIONAL HAZARDS; INDUSTRIAL CHEMICALS	Wolff, M.S. Fischbein, A. Thornton, J. Rice, C. Lilis, R. Selikoff, I.J. 1982 International Archives of Occupational and Environmental Health 49:199-208

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Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7826 Blood, serum			a) 342 b) 417 c) 431	a) Not given b) Not given c) Not given	a) 6 +or- 5 ppb b) 15 +or- 11 ppb c) 13 +or- 9 ppb	a) Children b) Men c) Women Levels correlated with age Weighted probability sample, 1978 population, MI MICHIGAN; ADULTS; AGE; CHILDREN; SEX; ADIPOSE TISSUE; BLOOD SERUM; DDE; PESTICIDES; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FIRE RETARDANTS; FOOD CONTAMINATION; PESTICIDE RESIDUES; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Wolff, M.S. Anderson, H.A. Selikoff, I.J. 1982 Journal of the American Medical Association 247(15):2112-2116
7827 Blood, serum		GC	a) 7 b) 8 c) 9 d) 7	a) Not given b) Not given c) Not given d) Not given	a) 13.51 +or- 7.87 ppb b) 12.84 +or- 4.19 ppb c) 13.26 +or- 9.18 ppb d) 14.63 +or- 13.03 ppb	a) Controls, normal 2nd trimester pregnancies, no missed abortions b) Low serum PCB, recent missed abortions (mean 1.62) c) High serum PCB, recent missed abortions (mean 1.50) d) Former missed abortions (mean 3.43) In missed abortions, products of conception were retained in utero at least 6 wk after fetal death, which occurred before week 20 of gestation. Women with missed abortions (mean age 28.1 yr for high PCB group) and controls (mean age 24.7 yr) ADULTS; BLOOD SERUM; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; PREGNANCY	Sercovici, B. Wassermann, M. Cucos, S. Ron, M. Wassermann, D. Pines, A. 1983 Environmental Research 30:169-174

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Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.6 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7820 Blood, serum		CC GC	27	a) Not given b) Not given c) Not given d) Not given	a) 10.7 +or- 6.1 ppb b) 18.1 +or- 7.3 ppb c) 14.9 +or- 5.2 ppb d) 26.0 +or- 4.5 ppb	a) Normal 3rd-trimester pregnancies, 18 cases b) Premature doliveries, 17 cases c) 12 cases from b), total DDT <100 ppb d) 5 cases from b), total DDT >100 ppb Significant differences between a) and b), d) (p<0.01) BLOOD SERUM; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; METABOLITES; PESTICIDE RESIDUES; PREGNANCY	Wassermann, M. Ron, M. Bercovici, B. Wassermann, D. Cucos, S. Pines, A. 1982 Environmental Research 28:106-112

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Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7029 Milk		GC	133	a) 5.0-88.5 ppb b) 500-3150 ppb c) 6.1-61.1 ppb d) 250-1660 ppb e) 3.7-95.2 ppb f) 140-2100 ppb g) 2.8-90.7 ppb h) 500-2630 ppb i) 5.8-61.1 ppb j) 210-2580 ppb k) 3.1-95.9 ppb l) 260-2680 ppb m) 7.9-67.3 ppb n) 560-3380 ppb	a) 29.0 +or- 21.7 ppb b) 1440 +or- 740 ppb c) 20.7 +or- 14.6 ppb d) 940 +or- 390 ppb e) 23.2 +or- 21.1 ppb f) 1220 +or- 980 ppb g) 23.5 +or- 20.7 ppb h) 1290 +or- 1350 ppb i) 28.2 +or- 16.7 ppb j) 1230 +or- 550 ppb k) 30.6 +or- 30.7 ppb l) 1340 +or- 820 ppb m) 25.7 +or- 15.4 ppb n) 1290 +or- 720 ppb	a) Milk, 19 women from Lillehammer, mean age 27.5 yr, mean days post partum 4.7 b) Milk extractable fat, group a) c) Milk, 19 women from Oslo, mean age 26.5 yr, mean days post partum 130 d) Milk extractable fat, group c) e) Milk, 19-20 women from Kristiansand, mean age 24.1 yr, mean days post partum 5.2 f) Milk extractable fat, group e) g) Milk, 20 women from Porsgrunn, mean age 25.3 yr, mean days post partum 4.6 h) Milk extractable fat, group g) i) Milk, 19 women from Tromso, mean age 25.6 yr, mean days post partum 5.2 j) Milk extractable fat, group i) k) Milk, 17 women from Trondheim, mean age 26.6 yr, mean days post partum 4.9 l) Milk extractable fat, group k) m) Milk, 20 women from Bergen, mean age 23.8 yr, mean days post partum 5.0 n) Milk extractable fat, group m) Significant difference ($p < 0.05$) between b) and d) Norway, 7 cities in different areas, varying degrees of industrialization No threat to infants' health HUMAN; ADULTS; MILK; DDE; DDT; HEXACHLOROBENZENE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; INDUSTRIAL AREAS; LACTATION; METABOLITES; PESTICIDE RESIDUES; POPULATION EXPOSURE; URBAN AREAS	Skaare, J.U. 1981 Acta Pharmacologica et Toxicologica 49:384-389

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Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7030 Milk		GC Chem TLC	15	a) 1.36-36.01 ug/g b) 0.013-0.984 ug/ml	a) 10.35 +or- 11.02 ug/g b) 0.202 +or- 0.266 ug/ml	a) Extractable lipid b) Whole milk All samples tested contained >0.01 ug/g extractable lipid 16-30 yr olds with infants 1-29 days old. Urban and rural areas, medium and low income levels, March 1976, Comarca, Mexico MEXICO; ADULTS; MILK; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; PESTICIDES; BIOACCUMULATION; LACTATION; METABOLITES; PESTICIDE RESIDUES; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Albert, L. Vega, P. Portoles, A. 1981 Pesticides Monitoring Journal 15(3):135-138
7031 Milk		GC-EC	10	Not given	1.42 +or- 1.18 ppm	Fat milk basis Samples from maternity hospitals, Tokyo metropolitan area, Sept.-Nov. 1980, Japan JAPAN; ADULTS; MILK; MEASUREMENT METHODS; DDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; INSECTICIDES; NONACHLOR; OXYCHLORDANE; PESTICIDES; LACTATION; PESTICIDE RESIDUES	Miyazaki, T. 1983 Bulletin of Environmental Contamination and Toxicology 29:566-569
7032 Milk						Review. Breast milk contamination by chlorinated hydrocarbon insecticides and industrial pollutants, U.S. and Canada. CALIFORNIA; CANADA; DISTRICT OF COLUMBIA; MICHIGAN; MISSISSIPPI; TENNESSEE; TEXAS; UNITED STATES; AGE; INFANTS; RACIAL STUDIES; MILK; REVIEW; ALDRIN; DDE; DDT; DIELDRIN; CHLORINATED HYDROCARBONS; HEPTACHLOR EPOXIDE; HEPTACHLOROCTCLOHEXANE; HEXACHLOROBENZENE; INSECTICIDES; LINDANE; OXYCHLORDANE; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; DIETS; FARMS; FOOD CONTAMINATION; FOODS; LACTATION; METABOLITES; RURAL AREAS; SMOKING; URBAN AREAS	Calabrese, E.J. 1982 Journal of the American College of Toxicology 1(3):91-98

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Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl2
MW 318.02, MP 88.4 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7833 Milk		GC-EC	20	0.052-0.25 ppm	0.17 +or- 0.062 ppm	Samples in April-July 1981 Lactating mothers, Madrid, Spain SPAIN; MILK; COMPARATIVE EVALUATIONS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; MERCURY; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; LACTATION; PESTICIDE RESIDUES	Beluja, G. Hernandez, L.M. Gonzalez, M.J. Rico, M.C. 1982 Bulletin of Environmental Contamination and Toxicology 28:573-577
7834 Semen		GC		0.001-0.012 ug/g	0.003 ug/g	Mean of 50 samples, 40% positive. o,p'-DDT and p,p'-DDT not detected Random samples of fertile and infertile men, Poland POLAND, SEMEN; CHLORINATED HYDROCARBONS; DDE; HEXACHLOROCYCLOHEXANE; HEXACHLOROBENZENE; LINDANE; PESTICIDES; METABOLITES; PESTICIDE RESIDUES; POPULATION EXPOSURE	Szymczynski, S.A. Waliszewski, S.M. 1981 International Journal of Andrology 4:669-674

Ferritins
9007-73-2
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7835 Blood, serum						Review. Direct quantitation of serum ferritin, a convenient and accurate measure of total body iron stores, is also a means of diagnosing and distinguishing between iron-deficiency and other anemias. FERRITIN; ADULTS; CHILDREN; INFANTS; NEWBORN; SEX; ANEMIA; DISEASES; BLOOD SERUM; REVIEW; HEMOGLOBINS; IRON; PREGNANCY	Engel, R.R. Pribor, H.C. 1978 Laboratory Management 16(10):31-34

Fluoride
16984-48-8
F
AtW 18.9984

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7836 Blood, serum	Ingestion		9	a) 0.012-0.018 ppm b) 0.015-0.022 ppm c) 0.042-0.050 ppm d) 0.038-0.048 ppm	a) Not given b) Not given c) Not given d) Not given	a) Bedrest, 8-17 wk, mean dietary intake 0.43 mg/day, 5 cases b) Same men, ambulatory, 5 or 9 wk, mean dietary intake 0.43 mg/day c) Bedrest, 6 wk, diet supplemented with 10 mg/day, 4 cases d) Same men, ambulatory, 5 wk, diet supplemented with 10 mg/day Range of individual means from biweekly samples. Some data estimated from graph. Healthy 20-44 yr olds, wt 60-88 kg, ht 158-188 cm, CA CALIFORNIA; ADULTS; BLOOD SERUM; URINE; FLUORIDE; DIETS	Maheshwari, U.B. Schneider, V.S. McDonald, J.T. Brunetti, A.J. Leybin, L. Newbrun, E. Hodge, H. 1982 American Journal of Clinical Nutrition 36:211-218
7837 Urine	Ingestion	AAS	13	a) 0.58-1.18 mg/day b) 0.53-0.98 mg/day c) 6.27-7.71 mg/day d) 5.78-7.47 mg/day	a) Not given b) Not given c) Not given d) Not given	a) Bedrest, 8-17 wk, mean dietary intake 0.43 mg/day, 9 cases b) Same men, ambulatory, 5 or 9 wk, mean dietary intake 0.43 mg/day c) Bedrest, 6 wk, diet supplemented with 10 mg/day, 4 cases d) Same men, ambulatory, 5 wk, diet supplemented with 10 mg/day Range of individual means Supplements did not protect against bed rest-induced Ca loss Healthy 20-44 yr olds, wt 60-88 kg, ht 158-188 cm, CA CALIFORNIA; ADULTS; BLOOD SERUM; URINE; FLUORIDE; DIETS	Maheshwari, U.B. Schneider, V.S. McDonald, J.T. Brunetti, A.J. Leybin, L. Newbrun, E. Hodge, H. 1982 American Journal of Clinical Nutrition 36:211-218

Folic acid (8 CI)
L-Glutamic acid, N-(4-(((2-amino-1,4-dihydro-4-oxo-6-pteridinyl)methyl)amino)benzoyl)- (9 CI)
59-30-3
C19-H19-N7-O6
MW 441.40

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7030 Blood, serum		Microbiological	a) 65 b) 67 c) 126	a) Not given b) Not given c) Not given	a) 6.7 +or- 2.7 ug/l b) 5.8 +or- 2.7 ug/l c) 5.9 +or- 2.6 ug/l	a) Europeans b) West Indians c) Asians 13 yr olds, similar wt, ht ASIA; INDIA; UNITED KINGDOM; ADULTS; CHILDREN; RACIAL STUDIES; SCHS DISEASES; BLOOD SERUM; CALCIUM; VITAMIN D; VITAMINS; DIETS; GENETIC EFFECTS	Ellis, G. Woodhead, J.S. Cooke, W.T. 1977 Lancet 1:825-828

Gold
7440-57-5
Au
AtW 196.9665, MP 1064.76 C, BP 2700 C, VP 1 mm Hg at 1869 C, 10 mm Hg at 2160 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7039 Hair		NA	1	Not applicable	0.45 +or- 0.06 ppm	8 cm length, from distal end, obtained from Napoleon Bonaparte in 1821 CASE HISTORIES; HAIR; ANTIMONY; ARSENIC; BROMINE; GOLD; POTASSIUM; SODIUM	Levin, P.E. Hancock, R.G.V. Voynovich, P. 1982 Nature 299:627-628

Halogenated organics (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7040 Adrenal gland						A model is developed for comparative assessment of halogenated organics in man and environmental media, and for demonstrating an association between body-burden and the incidence of cancer. U.S. ADRENAL GLANDS; BLOOD; BLOOD PLASMA; BLOOD SERUM; BONE MARROW; BRAIN; HAIR; KIDNEYS; LIVER; LUNGS; MILK; OVARIES; SPLEEN; TESTES; URINE; REVIEW; UNITED STATES; NEOPLASMS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; FLUORINE COMPOUNDS; INDUSTRIAL CHEMICALS; AIR POLLUTION; FOOD CONTAMINATION; INDUSTRIAL AREAS; INDUSTRIAL EMISSIONS; INDUSTRIAL PLANTS; INDUSTRIAL POLLUTION; POPULATION EXPOSURE; WATER POLLUTION	Pellizzari, E.D. Erickson, M.D. Zweidinger, R.A. 1979 EPA-560/13-79-006, 469 pp.
7041 Blood						A model is developed for comparative assessment of halogenated organics in man and environmental media, and for demonstrating an association between body-burden and the incidence of cancer. U.S. ADRENAL GLANDS; BLOOD; BLOOD PLASMA; BLOOD SERUM; BONE MARROW; BRAIN; HAIR; KIDNEYS; LIVER; LUNGS; MILK; OVARIES; SPLEEN; TESTES; URINE; REVIEW; UNITED STATES; NEOPLASMS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; FLUORINE COMPOUNDS; INDUSTRIAL CHEMICALS; AIR POLLUTION; FOOD CONTAMINATION; INDUSTRIAL AREAS; INDUSTRIAL EMISSIONS; INDUSTRIAL PLANTS; INDUSTRIAL POLLUTION; POPULATION EXPOSURE; WATER POLLUTION	Pellizzari, E.D. Erickson, M.D. Zweidinger, R.A. 1979 EPA-560/13-79-006, 469 pp.

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Halogenated organics (No postings in CHEMLINE).

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7842 Blood, plasma						A model is developed for comparative assessment of halogenated organics in man and environmental media, and for demonstrating an association between body-burden and the incidence of cancer. U.S. ADRENAL GLANDS; BLOOD; BLOOD PLASMA; BLOOD SERUM; BONE MARROW; BRAIN; HAIR; KIDNEYS; LIVER; LUNGS; MILK; OVARIES; SPLEEN; TESTES; URINE; REVIEW; UNITED STATES; NEOPLASMS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; FLUORINE COMPOUNDS; INDUSTRIAL CHEMICALS; AIR POLLUTION; FOOD CONTAMINATION; INDUSTRIAL AREAS; INDUSTRIAL EMISSIONS; INDUSTRIAL PLANTS; INDUSTRIAL POLLUTION; POPULATION EXPOSURE; WATER POLLUTION	Pellizzari, E.D. Erickson, M.D. Zweidinger, R.A. 1979 EPA-560/13-79-006, 469 pp.
7843 Blood, serum						A model is developed for comparative assessment of halogenated organics in man and environmental media, and for demonstrating an association between body-burden and the incidence of cancer. U.S. ADRENAL GLANDS; BLOOD; BLOOD PLASMA; BLOOD SERUM; BONE MARROW; BRAIN; HAIR; KIDNEYS; LIVER; LUNGS; MILK; OVARIES; SPLEEN; TESTES; URINE; REVIEW; UNITED STATES; NEOPLASMS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; FLUORINE COMPOUNDS; INDUSTRIAL CHEMICALS; AIR POLLUTION; FOOD CONTAMINATION; INDUSTRIAL AREAS; INDUSTRIAL EMISSIONS; INDUSTRIAL PLANTS; INDUSTRIAL POLLUTION; POPULATION EXPOSURE; WATER POLLUTION	Pellizzari, E.D. Erickson, M.D. Zweidinger, R.A. 1979 EPA-560/13-79-006, 469 pp.

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Halogenated organics (No postings in CHEMLINE).

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7844 Bone marrow						A model is developed for comparative assessment of halogenated organics in man and environmental media, and for demonstrating an association between body-burden and the incidence of cancer. U.S. ADRENAL GLANDS; BLOOD; BLOOD PLASMA; BLOOD SERUM; BONE MARROW; BRAIN; HAIR; KIDNEYS; LIVER; LUNGS; MILK; OVARIES; SPLEEN; TESTES; URINE; REVIEW; UNITED STATES; NEOPLASMS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; FLUORINE COMPOUNDS; INDUSTRIAL CHEMICALS; AIR POLLUTION; FOOD CONTAMINATION; INDUSTRIAL AREAS; INDUSTRIAL EMISSIONS; INDUSTRIAL PLANTS; INDUSTRIAL POLLUTION; POPULATION EXPOSURE; WATER POLLUTION	Pellizzari, E.D. Erickson, M.D. Zweidinger, R.A. 1979 EPA-560/13-79-006, 469 pp.
7845 Brain						A model is developed for comparative assessment of halogenated organics in man and environmental media, and for demonstrating an association between body-burden and the incidence of cancer. U.S. ADRENAL GLANDS; BLOOD; BLOOD PLASMA; BLOOD SERUM; BONE MARROW; BRAIN; HAIR; KIDNEYS; LIVER; LUNGS; MILK; OVARIES; SPLEEN; TESTES; URINE; REVIEW; UNITED STATES; NEOPLASMS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; FLUORINE COMPOUNDS; INDUSTRIAL CHEMICALS; AIR POLLUTION; FOOD CONTAMINATION; INDUSTRIAL AREAS; INDUSTRIAL EMISSIONS; INDUSTRIAL PLANTS; INDUSTRIAL POLLUTION; POPULATION EXPOSURE; WATER POLLUTION	Pellizzari, E.D. Erickson, M.D. Zweidinger, R.A. 1979 EPA-560/13-79-006, 469 pp.

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Halogenated organics (No postings in CHEMLINE).

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7846 Breath						A model is developed for comparative assessment of halogenated organics in man and environmental media, and for demonstrating an association between body-burden and the incidence of cancer. U.S. ADRENAL GLANDS; BLOOD; BLOOD PLASMA; BLOOD SERUM; BONE MARROW; BRAIN; HAIR; KIDNEYS; LIVER; LUNGS; MILK; OVARIES; SPLEEN; TESTES; URINE; REVIEW; UNITED STATES; NEOPLASMS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; FLUORINE COMPOUNDS; INDUSTRIAL CHEMICALS; AIR POLLUTION; FOOD CONTAMINATION; INDUSTRIAL AREAS; INDUSTRIAL EMISSIONS; INDUSTRIAL PLANTS; INDUSTRIAL POLLUTION; POPULATION EXPOSURE; WATER POLLUTION	Pellizzari, E.D. Erickson, M.D. Sveidinger, R.A. 1979 EPA-560/13-79-006, 469 pp.
7847 Gonads						A model is developed for comparative assessment of halogenated organics in man and environmental media, and for demonstrating an association between body-burden and the incidence of cancer. U.S. ADRENAL GLANDS; BLOOD; BLOOD PLASMA; BLOOD SERUM; BONE MARROW; BRAIN; HAIR; KIDNEYS; LIVER; LUNGS; MILK; OVARIES; SPLEEN; TESTES; URINE; REVIEW; UNITED STATES; NEOPLASMS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; FLUORINE COMPOUNDS; INDUSTRIAL CHEMICALS; AIR POLLUTION; FOOD CONTAMINATION; INDUSTRIAL AREAS; INDUSTRIAL EMISSIONS; INDUSTRIAL PLANTS; INDUSTRIAL POLLUTION; POPULATION EXPOSURE; WATER POLLUTION	Pellizzari, E.D. Erickson, M.D. Sveidinger, R.A. 1979 EPA-560/13-79-006, 469 pp.

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Halogenated organics (No postings in CHEMLINE).

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7848 Hair						A model is developed for comparative assessment of halogenated organics in man and environmental media, and for demonstrating an association between body-burden and the incidence of cancer. U.S. ADRENAL GLANDS; BLOOD; BLOOD PLASMA; BLOOD SERUM; BONE MARROW; BRAIN; HAIR; KIDNEYS; LIVER; LUNGS; MILK; OVARIES; SPLEEN; TESTES; URINE; REVIEW; UNITED STATES; NEOPLASMS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; FLUORINE COMPOUNDS; INDUSTRIAL CHEMICALS; AIR POLLUTION; FOOD CONTAMINATION; INDUSTRIAL AREAS; INDUSTRIAL EMISSIONS; INDUSTRIAL PLANTS; INDUSTRIAL POLLUTION; POPULATION EXPOSURE; WATER POLLUTION	Pellizzari, E.D. Erickson, M.D. Zweidinger, R.A. 1979 EPA-560/13-79-006, 469 pp.
7849 Kidney						A model is developed for comparative assessment of halogenated organics in man and environmental media, and for demonstrating an association between body-burden and the incidence of cancer. U.S. ADRENAL GLANDS; BLOOD; BLOOD PLASMA; BLOOD SERUM; BONE MARROW; BRAIN; HAIR; KIDNEYS; LIVER; LUNGS; MILK; OVARIES; SPLEEN; TESTES; URINE; REVIEW; UNITED STATES; NEOPLASMS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; FLUORINE COMPOUNDS; INDUSTRIAL CHEMICALS; AIR POLLUTION; FOOD CONTAMINATION; INDUSTRIAL AREAS; INDUSTRIAL EMISSIONS; INDUSTRIAL PLANTS; INDUSTRIAL POLLUTION; POPULATION EXPOSURE; WATER POLLUTION	Pellizzari, E.D. Erickson, M.D. Zweidinger, R.A. 1979 EPA-560/13-79-006, 469 pp.

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Halogenated organics (No postings in CHEMLINE).

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7850 Liver						A model is developed for comparative assessment of halogenated organics in man and environmental media, and for demonstrating an association between body-burden and the incidence of cancer. U.S. ADRENAL GLANDS; BLOOD; BLOOD PLASMA; BLOOD SERUM; BONE MARROW; BRAIN; HAIR; KIDNEYS; LIVER; LUNGS; MILK; OVARIES; SPLEEN; TESTES; URINE; REVIEW; UNITED STATES; NEOPLASMS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; FLUORINE COMPOUNDS; INDUSTRIAL CHEMICALS; AIR POLLUTION; FOOD CONTAMINATION; INDUSTRIAL AREAS; INDUSTRIAL EMISSIONS; INDUSTRIAL PLANTS; INDUSTRIAL POLLUTION; POPULATION EXPOSURE; WATER POLLUTION	Pellizzari, E.D. Erickson, M.D. Zweidinger, R.A. 1979 EPA-560/13-79-006, 469 pp.
7851 Lung						A model is developed for comparative assessment of halogenated organics in man and environmental media, and for demonstrating an association between body-burden and the incidence of cancer. U.S. ADRENAL GLANDS; BLOOD; BLOOD PLASMA; BLOOD SERUM; BONE MARROW; BRAIN; HAIR; KIDNEYS; LIVER; LUNGS; MILK; OVARIES; SPLEEN; TESTES; URINE; REVIEW; UNITED STATES; NEOPLASMS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; FLUORINE COMPOUNDS; INDUSTRIAL CHEMICALS; AIR POLLUTION; FOOD CONTAMINATION; INDUSTRIAL AREAS; INDUSTRIAL EMISSIONS; INDUSTRIAL PLANTS; INDUSTRIAL POLLUTION; POPULATION EXPOSURE; WATER POLLUTION	Pellizzari, E.D. Erickson, M.D. Zweidinger, R.A. 1979 EPA-560/13-79-006, 469 pp.

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Halogenated organics (No postings in CHEMLINE).

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7852 Milk						A model is developed for comparative assessment of halogenated organics in man and environmental media, and for demonstrating an association between body-burden and the incidence of cancer. U.S. ADRENAL GLANDS; BLOOD; BLOOD PLASMA; BLOOD SERUM; BONE MARROW; BRAIN; HAIR; KIDNEYS; LIVER; LUNGS; MILK; OVARIES; SPLEEN; TESTES; URINE; REVIEW; UNITED STATES; NEOPLASMS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; FLUORINE COMPOUNDS; INDUSTRIAL CHEMICALS; AIR POLLUTION; FOOD CONTAMINATION; INDUSTRIAL AREAS; INDUSTRIAL EMISSIONS; INDUSTRIAL PLANTS; INDUSTRIAL POLLUTION; POPULATION EXPOSURE; WATER POLLUTION	Pellizzari, E.D. Erickson, M.D. Zweidinger, R.A. 1979 EPA-560/13-79-006, 469 pp.
7853 Spleen						A model is developed for comparative assessment of halogenated organics in man and environmental media, and for demonstrating an association between body-burden and the incidence of cancer. U.S. ADRENAL GLANDS; BLOOD; BLOOD PLASMA; BLOOD SERUM; BONE MARROW; BRAIN; HAIR; KIDNEYS; LIVER; LUNGS; MILK; OVARIES; SPLEEN; TESTES; URINE; REVIEW; UNITED STATES; NEOPLASMS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; FLUORINE COMPOUNDS; INDUSTRIAL CHEMICALS; AIR POLLUTION; FOOD CONTAMINATION; INDUSTRIAL AREAS; INDUSTRIAL EMISSIONS; INDUSTRIAL PLANTS; INDUSTRIAL POLLUTION; POPULATION EXPOSURE; WATER POLLUTION	Pellizzari, E.D. Erickson, M.D. Zweidinger, R.A. 1979 EPA-560/13-79-006, 469 pp.

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Halogenated organics (No postings in CHEMLINE).

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7854 Urine						A model is developed for comparative assessment of halogenated organics in man and environmental media, and for demonstrating an association between body-burden and the incidence of cancer. U.S. ADRENAL GLANDS; BLOOD; BLOOD PLASMA; BLOOD SERUM; BONE MARROW; BRAIN; HAIR; KIDNEYS; LIVER; LUNGS; MILK; OVARIES; SPLEEN; TESTES; URINE; REVIEW; UNITED STATES; NEOPLASMS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; FLUORINE COMPOUNDS; INDUSTRIAL CHEMICALS; AIR POLLUTION; FOOD CONTAMINATION; INDUSTRIAL AREAS; INDUSTRIAL EMISSIONS; INDUSTRIAL PLANTS; INDUSTRIAL POLLUTION; POPULATION EXPOSURE; WATER POLLUTION	Pellizzari, E.D. Erickson, M.D. Zweidinger, R.A. 1979 EPA-560/13-79-006, 469 pp.

Hexane
110-54-3
C6-H14
MW 86.17, BP 68.7 C, VP 100 mm Hg at 15.8 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7855 Blood	Inhalation	GC	6	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given m) Not given n) Not given o) Not given p) Not given	a) 0.183 +or- 0.075 mg/l b) 0.202 +or- 0.020 mg/l c) 0.201 +or- 0.042 mg/l d) 0.207 +or- 0.032 mg/l e) 0.334 +or- 0.047 mg/l f) 0.357 +or- 0.061 mg/l g) 0.370 +or- 0.049 mg/l h) 0.368 +or- 0.044 mg/l i) 0.231 +or- 0.059 mg/l j) 0.265 +or- 0.048 mg/l k) 0.290 +or- 0.042 mg/l l) 0.195 +or- 0.046 mg/l m) 0.256 +or- 0.052 mg/l n) 0.271 +or- 0.035 mg/l o) 0.289 +or- 0.049 mg/l p) 0.331 +or- 0.033 mg/l	a) After 50 min exposure to 360 mg/cu m b) After 100 min exposure to 360 mg/cu m c) After 150 min exposure to 360 mg/cu m d) After 200 min exposure to 360 mg/cu m e) After 50 min exposure to 720 mg/cu m f) After 100 min exposure to 720 mg/cu m g) After 150 min exposure to 720 mg/cu m h) After 200 min exposure to 720 mg/cu m i) After 50 min exposure to 360 mg/cu m, work load of 20 W j) After 50 min exposure to 360 mg/cu m, work load of 40 W k) After 50 min exposure to 360 mg/cu m, work load of 60 W l) After 10 min exposure to 360 mg/cu m, work load of 20 W m) After 10 min exposure to 360 mg/cu m, work load of 40 W n) After 10 min exposure to 360 mg/cu m, work load of 60 W o) After 10 min exposure to 360 mg/cu m, work load of 80 W p) After 10 min exposure to 360 mg/cu m, work load of 100 W Mean peaks. Exercise (work load) on a bicycle ergometer Healthy 25-35 yr olds ADULTS; BLOOD; BREATH; INHALATION; INDUSTRIAL CHEMICALS; HYDROCARBONS	Veulemans, H. Van Vlem, E. Janssens, H. Masschelein, R. Leplat, A. 1982 International Archives of Occupational and Environmental Health 49:251-263
7856 Breath	Inhalation	GC	6	a) 32-2 mg/cu m b) 58-5 mg/cu m	a) Not given b) Not given	a) 5 and 240 min after 4 hr exposure to 360 mg/cu m (100 ppm), at rest b) 5 and 240 min after 4 hr exposure to 720 mg/cu m (200 ppm), at rest Range of means, estimated from data. Data also for aveolar retention and lung clearance Healthy 25-35 yr olds ADULTS; BLOOD; BREATH; INHALATION; INDUSTRIAL CHEMICALS; HYDROCARBONS	Veulemans, H. Van Vlem, E. Janssens, H. Masschelein, R. Leplat, A. 1982 International Archives of Occupational and Environmental Health 49:251-263

Hydantoin, 5,5-diphenyl- (8 CI)
2,4-Imidazolidinedione, 5,5-diphenyl- (9 CI)
57-41-0
C15-H12-N2-O2
MW 252.26, MP 295-298 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7857 Blood, serum						Review. Assessment of clinical use of laboratory determinations for metals, anticonvulsive agents, and cardiovascular drugs. ADULTS; AGE; CHILDREN; ANEMIA; BONE DISEASES; DISEASES; MENTAL RETARDATION; METAL POISONING; NUTRITIONAL DEFICIENCIES; SKIN DISEASES; BLOOD; BLOOD PLASMA; BLOOD SERUM; LIVER; URINE; ANTIARRHYTHMIC AGENTS; ANTICONVULSANTS; DIURETICS; DRUG THERAPY; DRUGS; HYPNOTICS; MUSCLE RELAXANTS; SEDATIVES; TRANQUILIZERS; REVIEW; COPPER; DIAZEPAM; IRON; LEAD; LITHIUM; THEOPHYLLINES; ZINC; PAINTS	Weiss, H.B. Rosenthal, I.M. 1978 Journal of Analytical Toxicology 2:166-171

Iodine
7553-56-2
I
AtW 126.9045, MP 113.60 C, BP 185.24 C, VP (solid) 0.03 mm Hg at 0 C, 0.305 mm Hg at 25 C, 2.154 mm Hg at 50 C, 26.70 mm Hg at 90 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7858 Blood, serum	Dermal	Chem	a) 61 b) 61 c) 17 d) 18	a) 5.8-187.0 ug/dl b) 12.5-175.0 ug/dl c) 5.5-15.5 ug/dl d) 6.6-17.4 ug/dl	a) Not given b) Not given c) Not given d) Not given	a) Mothers at delivery, perinatal exposure to povidone-iodine as germicide b) Exposed infants c) Nonexposed mothers d) Nonexposed infants Range of means. 5-30 hr exposures. Berlin, Federal Republic of Germany Altered thyroid gland function GERMICIDES; IODINE; ADULTS; NEWBORN; BLOOD SERUM; THYROID GLANDS; URINE; COMPARATIVE EVALUATIONS	l'Allemand, D. Gruters, A. Heidemann, P. Heberbrand, P. 1983 Journal of Pediatrics 103(6):935-939

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Iodine
7553-56-2
I
AtW 126.9045, MP 113.60 C, BP 185.24 C, VP (solid) 0.03 mm Hg at 0 C, 0.305 mm Hg at 25 C, 2.154 mm Hg at 50 C, 26.70 mm Hg at 90 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7859 Hair						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).
7860 Sweat						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).
7861 Urine	Dermal	Chem	a) 41 b) 41 c) 17 d) 18	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 600 ug/dl b) 13.2 ug/dl c) 5.3 ug/dl d) 4.1 ug/dl e) 175 ug/dl f) 32.5 ug/dl g) 3.8 ug/dl h) 2.7 ug/dl	a) Mothers, day 1 b) Mothers, day 5 c) Controls, mothers, day 1 d) Controls, mothers, day 5 e) Infants, day 1 f) Infants, day 5 g) Controls, infants, day 1 h) Controls, infants, day 5 Days after deliveries in which poridone-iodine was used as topical germicide, 5-30 hr exposures. Berlin, Federal Republic of Germany Altered thyroid gland function GERMICIDES; IODINE; ADULTS; NEWBORN; BLOOD SERUM; THYROID GLANDS; URINE; COMPARATIVE EVALUATIONS	l'Allemand, D. Gruters, A. Heidemann, P. Schurabrand, P. 1983 Journal of Pediatrics 102(6):935-938

Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1530 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1707 C, 10 mm Hg at 2046 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7062 Blood		AAS	23	10.62-20.34 mg/period	12.78 +or- 2.02 mg/period	Menstrual blood. Mean hemoglobin 13.90 g/dl, hematocrit 41.08%, blood serum Fe 93.48 ug/dl Healthy 21-40 yr olds (mean 26.4 yr), controlled metabolic diet, some on oral contraceptives, Nebraska BLOOD; NEBRASKA; ORAL CONTRACEPTIVES; COPPER; HEMOGLOBINS; IRON; MAGNESIUM; ZINC; DIETS; MENSTRUATION	Unorea, J. Zico, C. 1982 Nutrition Reports International 26(4):717-726
7063 Blood, plasma	Ingestion	AAS	9	a) Not given b) Not given c) Not given	a) 146 +or- 21 ug/100 ml b) 139 +or- 19 ug/100 ml c) 146 +or- 17 ug/100 ml	a) Fe 17.48 mg, Ca 788 mg, P 843 mg b) Fe 17.51 mg, Ca 788 mg, P 2042 mg c) Fe 17.65 mg, Ca 2362 mg, P 2443 mg Daily intake for 12 days. Fasting samples collected 2X during each experimental period. Range a)-c) 96-180 ug/100 ml. No significant effect of dietary treatments. College students, mean age 23.6 yr, ht 179 cm, wt 72 kg WISCONSIN; BLOOD PLASMA; BLOOD ZINC; URINE; COMPARATIVE EVALUATIONS; CALCIUM; COPPER; IRON; PHOSPHORUS; ZINC; DIETS	Snedaker, S.M. Smith, S.A. Gregor, J.L. 1982 Journal of Nutrition 112:136-143
7064 Blood, plasma			288	a) 0.12-1.10 ug/ml b) 0.26-1.16 ug/ml c) 0.30-1.34 ug/ml d) 0.12-1.22 ug/ml e) 0.12-1.34 ug/ml	a) 0.660 ug/ml b) 0.656 ug/ml c) 0.648 ug/ml d) 0.603 ug/ml e) 0.631 ug/ml	a) One Arm Point, 60 cases b) Lombadina, 19 cases c) Broglo Bay 37 cases d) La Grange, 82 cases e) All locations, 288 cases Hypoferremia in 51% of samples. 5-20 yr old aborigines, Northwest Australia and normal Caucasian children. AUSTRALIA; CHILDREN; NUTRITIONAL DEFICIENCIES; BLOOD PLASMA; HAIR; COPPER; IRON; ZINC; DIETS; DRINKING WATER	Chenk, D.B. Smith, R.M. Sparge, B.M. 1982 Clinical Applications of Recent Advances in Zinc Metabolism. Alan R. Liss, Inc., New York City, NY, (pp. 151-167).

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Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1600-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1707 C, 10 mm Hg at 2046 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7865 Blood, serum	Ingestion	AAS	4	a) Not given b) Not given c) 120-170 ug/dl	a) 141 +or- 17 ug/dl b) 148 +or- 16 ug/dl c) Not given	a) Intake 18.8 mg Fe and 49.67 mg Zn/day, 20 days b) Intake 18.8 mg Fe and 0.11 mg Zn/day, 20 days c) Range during a) and b) Sampled before breakfast on day 11 and 17 Level not affected by dietary treatments Healthy 21.0-28.8 yr olds, ht 168-192 cm, wt 69-82 kg WISCONSIN; ADULTS; BLOOD PLASMA; BLOOD SERUM; FECES; URINE; COMPARATIVE EVALUATIONS; COPPER; IRON; MAGNESIUM; MANGANESE; TIN; ZINC; DIETS; FOOD CONTAMINATION; METABOLISM; MINERAL METABOLISM	Johnson, M.A. Baier, M.J. Gregar, J.L. 1982 American Journal of Clinical Nutrition 35:1332-1338
7866 Blood, serum						Review. Assessment of clinical use of laboratory determinations for metals, anticonvulsive agents, and cardiovascular drugs. ADULTS; AGE; CHILDREN; ANEMIA; BONE DISEASES; DISEASES; MENTAL RETARDATION; METAL POISONING; NUTRITIONAL DEFICIENCIES; SKIN DISEASES; BLOOD; BLOOD PLASMA; BLOOD SERUM; LIVER; URINE; ANTIARRHYTHMIC AGENTS; ANTICONVULSANTS; DIURETICS; DRUG THERAPY; DRUGS; HYPNOTICS; MUSCLE RELAXANTS; SEDATIVES; TRANQUILIZERS; REVIEW; COPPER; DIAZEPAM; IRON; LEAD; LITHIUM; THEOPHYLLINE; ZINC; PAINTS	Weiss, H.B. Rosenthal, I.M. 1978 Journal of Analytical Toxicology 2:166-171

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Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7867 Blood, serum	Ingestion		2	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 22 mmol/l b) 4 mmol/l c) 12.5 mmol/l d) 17.5 mmol/l e) 5 mmol/l	a) 2 hr after 30 capsules ferrocarbonate (90 mg Fe/kg) b) 26 hr later after washouts with 0.9% NaCl solutions, intragastric instillation of 5 g desferrioxamine and NaHCO3, repeat of previous treatment plus 1 g desferrioxamine IM c) 2.5 hr after 60 ml ferrous fumarate (40 mg Fe/kg) and after gastric lavage with NaHCO3 desferrioxamine 5 g as an intragastric instillation plus 600 mg IM d) 13 hr after overdose e) 24 hr after overdose 20 and 21 mo old previously healthy girls, who developed septicemia due to YERSINIA ENTEROCOLITICA possibly because of accidental Fe overdose and treatment with desferrioxamine. 24 hr after Fe ingestion: fever, diarrhea, vomiting, circulatory disturbance, cerebral irritation, abdominal pain, lethargy, temporary macular rash, scattered necrotic lesions. YERSINIA ENTEROCOLITICA isolated from blood and feces. Improvement in 3-4 wk after antibiotics. CASE HISTORIES; CHILDREN; INFECTION; BLOOD SERUM; IRON; METALS; ACCIDENTAL POISONING	Melby, K. Slordahl, S. Guttaberg, T.J. Nordbo, S.A. 1982 British Medical Journal 285:467-468
7868 Blood, serum						Review. Direct quantitation of serum ferritin, a convenient and accurate measure of total body iron stores, is also a means of diagnosing and distinguishing between iron-deficiency and other anemias. FERRITIN; ADULTS; CHILDREN; INFANTS; NEWBORN; SEX; ANEMIA; DISEASES; BLOOD SERUM; REVIEW; HEMOGLOBINS; IRON; PREGNANCY	Engel, R.E. Priber, H.C. 1978 Laboratory Management 16(10):31-34

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Iron
7439-89-6
Fe
AEM 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7849 Bone		AAS	35	a) 249-3,960 ppm b) 510-3,630 ppm c) 302-3,050 ppm d) 575-3,030 ppm e) 185-4,180 ppm f) 465-4,070 ppm	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) Total femur-rib, Middle Woodland Gibson site b) Total femur-rib, Late Woodland Ledders site c) Female femur-rib, Middle Woodland Gibson site d) Female femur-rib, Late Woodland Ledders site e) Male femur-rib, Middle Woodland Gibson site f) Male femur-rib, Late Woodland Ledders site Range of means Skeletal remains LEAD; MAGNESIUM; MANGANESE; POTASSIUM; SODIUM; STRONTIUM; ZINC; ALUMINUM; CALCIUM; IRON; ILLINOIS; CADAVERS; BONES	Lambert, J.B. Vlasak, S.M. Thometz, A.C. Buikstra, J.B. 1983 American Journal of Physical Anthropology 59:289-294
7870 Hair		X-ray spectrom	a) 1 b) 1	a) 17.9-22.3 ug/g b) 15-225 ug/g	a) Not given b) Not given	a) 5 measurements at counting times of 300-5000 sec, 1 mm section of single hair, linear density 6.6 ug/mm b) 0-120 mm from cut end, Canadian Inuit fishing guide estimated from graph CANADA; IRAQ; ADULTS; HAIR; MEASUREMENT METHODS; CALCIUM; COPPER; IRON; LEAD; MERCURY; ZINC; BIOACCUMULATION; DIETS; FISHES; FOOD CONTAMINATION	Toribara, T.Y. Jackson, D.A. French, W.R. Thompson, A.C. Jaklevic, J.M. 1983 Analytical Chemistry 55:1846-1849
7871 Hair						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, E.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).

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Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1707 C, 10 mm Hg at 2040 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7072 Kidney		ICP-AES	a) 42 b) 39	a) 31-165 mg/kg b) 38-190 mg/kg Wet wt	a) 79 mg/kg b) 70 mg/kg Wet wt Medians	a) Cortex b) Medulla Autopsies within 48 hr Normal adults, Great Lakes region, Ontario, Canada CANADA; ADULTS; AUTOPSIES; KIDNEYS; LIVER; MEASUREMENT METHODS; CADMIUM; CALCIUM; COPPER; IRON; MAGNESIUM; MANGANESE; PHOSPHORUS; POTASSIUM; SODIUM; ZINC	Subramanian, K.S. Meranger, J.C. 1982 Science of the Total Environment 24:147-157
7073 Liver		ICP-AES	64	37-1069 mg/kg wet wt	307 mg/kg wet wt Median	Autopsies within 48 hr Normal adults, Great Lakes region, Ontario, Canada CANADA; ADULTS; AUTOPSIES; KIDNEYS; LIVER; MEASUREMENT METHODS; CADMIUM; CALCIUM; COPPER; IRON; MAGNESIUM; MANGANESE; PHOSPHORUS; POTASSIUM; SODIUM; ZINC	Subramanian, K.S. Meranger, J.C. 1982 Science of the Total Environment 24:147-157
7074 Milk	Ingestion	NA	21	<or= 0.1-19.9 ug/g	1.5 +or- 0.41 ug/g	Weekly samples, different foods on same day. 2-3 months beginning 15 days after childbirth. Mean calculated from samples with levels above detection limit Healthy subjects, Italy ITALY; ADULTS; MILK; IN VITRO ANALYSIS; LACTATION; ANTIMONY; CESIUM; CHROMIUM; COBALT; IRON; MERCURY; RUBIDIUM; SCANDIUM; TRACE ELEMENTS; ZINC	Clemente, G.F. Ingrao, G. Santaroni, G.P. 1982 Science of the Total Environment 24:255-265

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Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7875 Milk		AAS	35	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 1.05 +or- 0.28 ug/ml b) 0.84 +or- 0.16 ug/ml c) 0.78 +or- 0.30 ug/ml d) 0.56 +or- 0.27 ug/ml e) 0.49 +or- 0.20 ug/ml f) 0.43 +or- 0.16 ug/ml	a) Colostrum milk, mothers of preterm infants (28-34 wk gestation) b) Transitional milk, mothers of preterm infants (28-34 wk gestation) c) Mature milk, mothers of preterm infants (28-34 wk gestation) d) Colostrum milk, mothers of term infants (37-41 wk gestation) e) Transitional milk, mothers of term infants (37-41 wk gestation) f) Mature milk, mothers of term infants (37-41 wk gestation) Maternity ward. Ibadan, Nigeria NIGERIA; ADULTS; NUTRITIONAL DEFICIENCIES; MILK; COMPARATIVE EVALUATIONS; COPPER; IRON; ZINC; PREGNANCY	Atinmo, T. Omololu, A. 1982 Early Human Development 6:389-313
7876 Pineal gland		NA	96	0.1x10(E-4)-23.1x10(E-4) g/g dry wt	3.8x10(E-4) g/g dry wt	Autopsies 20-24 hr after death. Levels estimated from graph, constant over a wide range of fresh weights, not related to age, sex or body surface. 2-85 yr old males and females AUTOPSIES; PINEAL GLAND; BRAIN; COMPARATIVE EVALUATIONS; ANTIMONY; CESIUM; COBALT; IRON; RUBIDIUM; SELENIUM; ZINC	Dommel, U. Hock, A. Kasperek, K. Feinendegen, L.E. 1982 Science of the Total Environment 24:135-146
7877 Sweat						Review. The Structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hopps, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).

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Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7078 Urine	Ingestion	AAS	9	a) Not given b) Not given c) Not given	a) 0.14 +or- 3.03 mg/day b) 0.15 +or- 0.03 mg/day c) 0.22 +or- 0.08 mg/day	a) Daily intake: Fe 17.40 mg, Ca 780 mg, P 842 mg. Fe retention 0.56 +or- 1.44 mg/day b) Daily intake: Fe 17.51 mg, Ca 780 mg, P 2442 mg. Fe retention 0.84 +or- 1.34 mg/day c) Daily intake: Fe 17.65 mg, Ca 2302 mg, P 2443 mg. Fe retention -0.44 +or- 1.57 mg/day Composite samples for days 6-10 of 12-day period. c) significantly different from a) and b) College students, mean age 23.6 yr, ht 179 cm, wt 72 kg WISCONSIN; BLOOD PLASMA; BLOOD SERUM; URINE; COMPARATIVE EVALUATIONS; CALCIUM; COPPER; IRON; PHOSPHORUS; ZINC; DIETS	Snedeker, S.M. Smith, E.A. Gregor, J.L. 1982 Journal of Nutrition 112:136-143
7079 Urine	Ingestion	AAS	8	a) Not given b) Not given	a) 0.14 +or- 0.03 mg/day b) 0.13 +or- 0.02 mg/day	a) Intake 18.8 mg Fe and 49.67 mg Zn/day, 20 days b) Intake 18.8 mg Fe and 0.11 Zn/day, 20 days (control) Combined urinary/fecal losses indicate apparent retention of 1.8 mg/day for a) and 2.3 mg/day for b) Difference not significant. Healthy 21.0-28.0 yr olds, ht 168-192 cm, wt 69-82 kg WISCONSIN; ADULTS; BLOOD PLASMA; BLOOD SERUM; FECES; URINE; COMPARATIVE EVALUATIONS; COPPER; IRON; MAGNESIUM; MANGANESE; ZINC; ZINC; DIETS; FOOD CONTAMINATION; METABOLISM; MINERAL METABOLISM	Johnson, M.A. Baier, M.J. Gregor, J.L. 1982 American Journal of Clinical Nutrition 35:1322-1330

Isonicotinic acid hydrazide (8 CI)
4-Pyridinecarboxylic acid, hydrazide (9 CI)
54-85-3
C6-H7-N3-O
MW 137.15, MP 171.4 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7880 Milk						Review. General pharmacological principles associated with excretion of drugs and chemicals in human milk. PENNSYLVANIA; UNITED STATES; ADULTS; INFANTS; MILK; SALIVA; URINE; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTICOAGULANTS; ANTIPYRETICS; DIURETICS; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; CAFFEINE; NICOTINE; PESTICIDES; SODIUM; THEOPHYLLINES; ALCOHOLIC BEVERAGES; LACTATION; METABOLISM; METABOLITES; TOBACCOS	Berlin, C.H., Jr. 1981 Obstetrics and Gynecology 58(5)(supplement):17S-23S

Isonipecotic acid, 1-methyl-4-phenyl-, ethyl ester (8 CI)
4-Piperidinecarboxylic acid, 1-methyl-4-phenyl-, ethyl ester (9 CI)
57-42-1
C15-H21-N-O2
MW 247.35, MP 186-189 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7881 Bile	Injection	GC	2	17-134 mg	Not given	50 mg by rapid injection after overnight fast Samples by constant suction duodenal tube for 2.5 hr after dose Mg-sulfate to stimulate secretion 20-32 yr olds, wt 59-98 kg ADULTS; ANALGESICS; DRUGS; NARCOTICS; BILE	Dunkerley, R. Johnson, R. Schenker, S. Wilkinson, G.R. 1976 Clinical Pharmacology and Therapeutics 20(5):546-551
7882 Blood, plasma	Injection	GC	6	0.25-0.87 ug/ml	Not given	15 min and 4 hr after 50 mg Estimated from graph 20-32 yr olds, wt 59-98 kg ADULTS; ANALGESICS; DRUGS; NARCOTICS; BLOOD PLASMA	Dunkerley, R. Johnson, R. Schenker, S. Wilkinson, G.R. 1976 Clinical Pharmacology and Therapeutics 20(5):546-551

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7803 Aorta		AAS	75	a) <30 ppm b) 30-99 ppm c) 100-299 ppm d) 300+ ppm e) 15-540 ppm Ash wt	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 35 cases b) 18 cases c) 15 cases d) 7 cases e) 25 cases Autopsies, death from heart disease, cancer patients excluded 34-65 yr olds, 7 NC hospitals NORTH CAROLINA; ADULTS; AUTOPSIES; HEART DISEASES; AORTA; LIVER; CADMIUM; LEAD; METALS; BIOACCUMULATION; DRINKING WATER; SOILS	Veera, A.W. Johnson, W.D. Shuman, H.S. 1982 Archives of Environmental Health 37(2):98-102
7804 Blood	Dermal	AAS Radiometry	8	a) 0.00006-0.0043% of dose/100 ml b) 0.00029-0.006586 of dose/100 ml c) 0.00008-0.002276 of dose/100 ml d) -0.00009-0.000431 of dose/100 ml	a) 0.000911% of dose/100 ml b) 0.001531% of dose/100 ml c) 0.000711% of dose/100 ml d) 0.000211% of dose/100 ml	a) Test material applied (wet) to forehead b) Skin lightly scratched, test material applied (dry) c) Cream applied, occuled with tape d) Test material applied (dry) Test material, hair darkening cosmetic preparations, 0.1 ml of lotion (6 mmol Pb acetate/l) or 0.1 g of cream (9 mmol Pb/kg) spiked with 20 uCi Pb-203 acetate, exposure for 12 hr. Absorption was 0-0.3% 20-35 yr olds, ht 1.67-1.79 m, wt 55.7-87.0 kg ADULTS; BLOOD; BODY; URINE; LEAD; LEAD COMPOUNDS; COSMETICS; RADIOISOTOPES; RADIONUCLIDES	Moore, M.R. Meredith, P.A. Watson, W.S. Sumner, D.J. Taylor, H.E. Goldberg, A. 1980 Food and Cosmetics Toxicology 18:399-405

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7085 Blood		AAS	346	a) Not given b) 30-96 ug/dl c) 25-47 ug/dl d) Not given	a) >30 ug/dl b) 61.2 ug/dl c) 33.2 ug/dl d) >30 ug/dl	a) 53 of 100 children (49%) living near bridge and 30 of 82 (37%) distantly located, before paint-removal, Chelsea b) 19 center span workers who scraped paint and sprayed fresh paint. Wore industrial masks. Pb in air: 24-2017 ug/cu m c) 13 workers who cleaned surfaces of paint, recoated with zinc primer. Wore air-supplied respirators, were enclosed in protective booth. Air Pb 10-1090 ug/cu m d) 4 of 47 children (1-5 yr old) within 2 blocks of bridge and none of 76 children 2 blocks 0.3 km, after paint-removal, Charlestown. Mean Pb content 4 house-dust samples within 1 block of bridge 7580 ppm, 5 samples 1-3 blocks from bridge 620 ppm. Soil samples within 30 m, 3272 ppm. Bridge workers and nearby residents, Mystic River Bridge, Charlestown and Chelsea, Boston, MA Bridgeworkers showed fatigue, memory and sleep disturbances, central nervous system dysfunction, mild anemia. MASSACHUSETTS; ADULTS; CHILDREN; LEAD POISONING; METAL POISONING; BLOOD; LEAD; AIR POLLUTION; ATMOSPHERE; BIOACCUMULATION; DUST; HEALTH HAZARDS; INHALATION; OCCUPATIONAL HAZARDS; PAINTS; PARTICULATES; POPULATION EXPOSURE; SOILS; URBAN AREAS	Landrigan, P.J. Baker, E.L., Jr. Himmelstein, J.S. Stein, G.F. Waddig, J.P. Straub, W.E. 1983 New England Journal of Medicine 308(11):673-676

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Lead
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Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7086 Blood		AAS	104	a) 33.3-95.2 ug/100 ml b) 34.0-89.0 ug/100 ml c) 10.0-36.0 ug/100 ml d) 14.5-45.0 ug/100 ml e) 33.0-94.9 ug/100 ml f) 34.0-89.0 ug/100 ml g) 33.3-71.9 ug/100 ml h) 34.0-89.0 ug/100 ml i) 51.9-96.9 ug/100 ml j) 34.0-84.0 ug/100 ml	a) 61.3 +or- 12.8 ug/100 ml b) 68.1 +or- 13.7 ug/100 ml c) 22.0 +or- 5.9 ug/100 ml d) 27.9 +or- 8.2 ug/100 ml e) 56.8 +or- 15.7 ug/100 ml f) 57.2 +or- 15.3 ug/100 ml g) 47.8 +or- 9.7 ug/100 ml h) 57.0 +or- 13.7 ug/100 ml i) 71.0 +or- 11.80 ug/100 ml j) 57.6 +or- 21.0 ug/100 ml	a) 69 exposed workers, initial measurements b) 62, 12-18 mo later c) 35 nonexposed controls, initial measurements d) 32, 12-18 mo later e) 24 from a), blood Pb data available for entire employment f) 19, 12-18 mo later g) 15 from e), blood Pb history never >80 ug/100 ml, initial measurements h) 18, 12-18 mo later i) 9 from e), blood Pb history >80 ug/100 ml at some time j) 5, 12-18 mo later Significant differences between a), b) and c), d). Delta-aminolevulinic acid dehydratase correlated with blood Pb levels in control group but not in exposed group. Free erythrocyte protoporphyrin correlated with blood Pb levels in exposed group, not in controls. Workers employed at least 1 yr at secondary Pb smelter, controls at Al processing plant, CA CALIFORNIA; ADULTS; BLOOD; LEAD; HEMES; METALS; PORPHYRINS; BIOACCUMULATION; HEALTH HAZARDS; INDUSTRIAL EMISSIONS; INDUSTRIAL PLANTS; OCCUPATIONAL HAZARDS; SMELTERS	Valentine, J.L. Kolob, H.W. Broody, B.L. Gonick, H.C. Breen, C.P. Spivey, G.H. Culver, B.D. 1982 Journal of Occupational Medicine 24(2):120-125
7087 Blood		Polarography	a) 32 b) 30	a) Not given b) Not given	a) 38.6 ug/dl b) 9.85 ug/dl Geometric mean	a) Pb workers b) Controls Signifcant difference ($p<0.01$) Osmotic fragility of red blood cells lower in a) than in b) ($p<0.05$), Significantly different hemolysis patterns ($p<0.05$) Scrap lead refinery employees (mean age 43.6 yr), pesticide manufacture workers (mean age 38.6 yr) ADULTS; BLOOD; URINE; LEAD; METALS; BIOACCUMULATION; INDUSTRIAL ATMOSPHERES; INDUSTRIAL PLANTS; INDUSTRIES; OCCUPATIONAL HAZARDS	Kurai, I. Fukumoto, H. Horiguchi, S. 1982c International Archives of Occupational and Environmental Health 50:17-30

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7000 Blood		Polarography	a) 25 b) 38	a) Not given b) Not given	a) 37.1 ug/dl b) 6.39 ug/dl Geometric mean	a) Pb workers b) Controls Significant difference ($p<0.01$) Membrane cholesterol ($p<0.01$) and membrane cholesterol:phospholipids ratio ($p<0.05$) higher in a) than in b) Membrane phosphatidyl choline higher ($p<0.05$) and lysophosphatidyl choline lower ($p<0.05$) in a) than in b) Free cholesterol in plasma higher ($p<0.05$) in a) than in b) Pb refining workers (mean age 44.8 yr), railroad construction workers (mean age 44.1 yr) ADULTS; BLOOD; URINE; CHOLESTEROLS; LEAD; LIPIDS; METALS; BIOACCUMULATION; INDUSTRIAL ATMOSPHERES; INDUSTRIAL PLANTS; INDUSTRIES; OCCUPATIONAL HAZARDS	Karai, I. Fukumoto, K. Horiguchi, S. 1982a International Archives of Occupational and Environmental Health 50:11-16
7000 Blood		AAS	a) 87 b) 43	a) 6.9-26.8 ug/100 ml b) 5.0-34.2 ug/100 ml	a) 15.2 ug/100 ml b) 13.7 ug/100 ml	a) Controls b) Workers exposed to Hg 0.5-16 yr (mean 5.3 yr) Data also for Hg and Cd Workers and controls in 3 factories using elemental Hg. Subjects matched with respect to age, socioeconomic status and job, 20.9-59.2 yr old, wt 50-99 kg, ht 162-198 cm, Belgium BELGIUM; ADULTS; NEUROLOGIC MANIFESTATIONS; BLOOD; URINE; CADMIUM; IRON; MERCURY; METALS; HEALTH HAZARDS; INDUSTRIAL PLANTS; OCCUPATIONAL HAZARDS; SMOKING	Roels, H. Lauwerys, R. Buchet, J.-P. Bernard, A. Barthels, A. Oversteyns, M. Gaussin, J. 1982 International Archives of Occupational and Environmental Health 50:77-93

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7890 Blood			8334	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given m) Not given n) Not given o) Not given p) Not given q) Not given	a) 34.6 ug/dl b) 27.4 ug/dl c) 29.8 ug/dl d) 26.0 ug/dl e) 29.6 ug/dl f) 25.3 ug/dl g) 32.3 ug/dl h) 27.1 ug/dl i) 29.7 ug/dl j) 26.7 ug/dl k) 29.1 ug/dl l) 26.9 ug/dl m) 28.9 ug/dl n) 26.2 ug/dl o) 29.6 ug/dl p) 23.9 ug/dl q) 27.9 ug/dl Geometric mean	a) 1 yr or more at same residence, 382 children b) <1 yr at same residence, 3825 children c) Single parent family, 1414 children d) Two parent family, 3662 children e) No parent employed, 369 children f) Parent employed, 1898 children g) 4 or more children 6 yr or less in household, 422 children h) <4 children 6 yr or less in household, 7912 children i) No telephone, 1133 children j) Telephone, 8423 children k) Public source of health care, 4962 children l) No public source of health care, 2695 children m) Not in school or day care, 630 children n) In school or day care, 2585 children o) Race Black, 3923 children p) Race White, 2106 children q) Race Hispanic, 1190 children More data given on socioeconomic status, race, age, and dwelling condition and ownership Factors that impair family's ability to provide necessary care and supervision for young children associated with increased blood Pb levels. Sept 1976-Feb 1977, 1-72 mo old children, New Haven, CT CONNECTICUT; CHILDREN; BLOOD; LEAD; MENTAL; BIOACCUMULATION; DRINKING WATER; POPULATION EXPOSURE	Stark, A.D. Quah, R.F. Meigs, J.W. Bellucio, E.E. 1982 Journal of Epidemiology and Community Health 36:133-139

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Lead
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Pb
AEW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 570 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7881 Blood			751	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) 36-50 ug/100 ml h) Not given	a) >30 ug/100 ml b) >40 ug/100 ml c) >50 ug/100 ml d) >60 ug/100 ml e) >70 ug/100 ml f) >80 ug/100 ml g) Not given h) 63 ug/100 ml	a) 91.6% b) 60.8% c) 20.6% d) 5.6% e) 0.8% f) 0.2% g) Range of monthly means, estimated from graph h) Mean of 6,781 samples % of 6,781 samples Blood sampling usually performed monthly over 3 yr Air Pb range 25-350 ug/cu m 19-66 yr old employees automobile battery factory in Indiana, sampled 1975-76 INDIANA; ADULTS; BLOOD; LEAD; METALS; AUTOMOTIVE; BIOACCUMULATION; INDUSTRIAL PLANTS; INDUSTRIAL POLLUTION; INHALATION; OCCUPATIONAL HAZARDS	Gartside, P.S. Buncher, C.R. Lerner, S. 1982 International Archives of Occupational and Environmental Health 50:1-10
7882 Blood		AAS	56	a) 9-62 ug/dl b) 4-25 ug/dl c) 22-62 ug/dl d) 5-56 ug/dl	a) 33 +or- 15 ug/dl b) 12 +or- 6 ug/dl c) 39 +or- 12 ug/dl d) 20 +or- 16 ug/dl	a) 5 families (33 persons) engaged in gold/silver recovery from jewellers' waste using molten Pb procedure. 11 with >40 ug/dl b) 4 neighboring families (21 persons) not engaged in gold/silver recovery. 0 with >40 ug/dl c) 15 members of group a) directly involved in gold/silver recovery. 9 with >40 ug/dl d) 10 members of group a) living in gold/silver recovery families but did not actively engage in work. 2 with >40 ug/dl b) significantly different from a), c), and d) c) significantly different from d) Residents, 5 yr olds and older, rural village near Colombo, Sri Lanka SRI LANKA; ADULTS; CHILDREN; BLOOD; LEAD; METALS; BIOACCUMULATION; OCCUPATIONAL HAZARDS; RURAL AREAS	Ramakrishna, K.S. Ponnampalam, M. Brooks, R.R. Ryan, D.E. 1982 Archives of Environmental Health 37(2):110-120

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Lead
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Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7893 Blood			33	5-54 ug/dl	10.9 +or- 11.4 ug/dl	14% with levels >26 ug/dl. 0 of 16 normal controls and 6% of 24 Tourette Syndrome children had levels >26 ug/dl. No significant differences. 7-27 yr old students with pervasive developmental disorders and controls (mean age 25.9 yr) ADOLESCENTS; ADULTS; CHILDREN; BEHAVIOR DISORDERS; NERVOUS SYSTEM DISEASES; BLOOD; LEAD; METALS	Cohen, D.J. Paul, R. Anderson, G.M. Harcherik, D.F. 1982 Lancet 2(8289):94-95
7894 Blood		AAS	a) 300 b) 50	a) Not given b) 12-120 ug/dl	a) 14 +or- 2.5 ug/dl b) Not given	a) Black children in low-income families living near Pb-battery shredding plant, Madison b) 2-3 yr olds, New York. Negative correlation (r=-9.00) between serum 1,25-dihydroxycholecalciferol level (10-52 pg/ml) and blood Pb 1-16 yr olds, Madison, WI and New York, NY NEW YORK; WISCONSIN; ADOLESCENTS; AGE; CHILDREN; SEX; BLOOD; BLOOD SERUM; LEAD; METALS; VITAMIN D; INDUSTRIAL AREAS; POPULATION EXPOSURE	Mahaffey, K.R. Rosen, J.F. Chesney, R.W. Pooler, J.T. Smith, C.M. DeLuca, H.F. 1982 American Journal of Clinical Nutrition 35:1327-1331
7895 Blood	Inhalation	Chem	a)	a) 15-70 ug/dl b) 57-36 ug/dl c) 64-36 ug/dl	a) Not given b) Not given c) Not given	a) Levels 6/15/79 - 11/08/79. (Sn protoporphyrin (EPP) 551-422 ug/dl). 52 ug/dl on 2/12/81 (EPP 174 ug/dl). Part time worker in battery breaking plant. b) Levels 7/16/76 - 2/10/81 (EPP 74-220 ug/dl). Steel worker c) Levels 1/15/79 - 2/12/81 (EPP 34-164 ug/dl). Steel worker Blood Pb and EPP decreased with reduced occupational exposure. Workers exposed to airborne contaminants BIOLOGICAL MONITORING; OCCUPATIONAL DISEASES; BLOOD; COMPARATIVE EVALUATIONS; INDUSTRIAL HYGIENE; ADULTS; LEAD POISONING; LEAD; BIOINDICATORS; HEALTH HAZARDS; INDUSTRIAL POLLUTION; OCCUPATIONAL HAZARDS; METALS; PROTOPORPHYRINS	Grunder, F.I. Moffitt, M.S. Moffitt, A.E., Jr. 1982 American Industrial Hygiene Association Journal 43:271-274

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1400 C, 1 mm Hg at 970 C, 10 mm Hg at 1168 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	NAMES	MEAN	GENERAL INFORMATION	REFERENCE
7086 Blood		AAS	a) 107 b) 115 c) 13	a) Not given b) Not given c) Not given	a) 143 ug/l b) 483 ug/l c) 323 ug/l Geometric mean	a) 2-3 yr olds living 0.5-6 km from lead smelter b) Adult male smelter workers c) Adult male painters in car factory Positive correlation with free erythrocyte porphyrin Residents of The Netherlands ADULTS; CHILDREN; BLOOD; LEAD; HAEMANEMIA; METALS; PORPHYRINS; AUTOMOTIVE; BIOACCUMULATION; INDUSTRIAL AREAS; INDUSTRIAL EMISSIONS; INDUSTRIAL PLANTS; INDUSTRIAL POLLUTION; OCCUPATIONAL HAZARDS; PAINTS; POPULATION EXPOSURE; SMELTERS	Wibowo, A.A.E. Sallo, H.J.A. del Castilho, P. Zielhuis, R.L. 1979 International Archives of Occupational and Environmental Health 43:177-183
7087 Blood		AAS	41	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 53.2 +or- 10.7 ug/dl b) 38.9 +or- 9.2 ug/dl c) 41.1 +or- 11.7 ug/dl d) 37.2 +or- 9.2 ug/dl e) 36.6 +or- 10.4 ug/dl	a) Level at admission b) After 2 wk therapy c) After 4 wk therapy d) After 6 wk therapy e) After 12 wk therapy Therapy, oral d-penicillamine, 30 mg/kg/day, in 3 doses, on empty stomach. Steady decline in free erythrocyte protoporphyrin and steady rise in ALAD during therapy. Asymptomatic children, blood Pb 40-60 ug/dl, NJ. NEW JERSEY; CHILDREN; LEAD POISONING; METAL POISONING; BLOOD; DRUG THERAPY; DRUGS; CHELATING AGENT; LEAD; LEVULINIC ACIDS; METALS; PROTOPORPHYRINS	Harvey, S.M. 1982 Veterinary and Human Toxicology 24(1):18-20

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Lead
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Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7890 Blood		Dithizone AAS	7520	a) 0.0-97.1 ug/dl b) 0.0-97.1 ug/dl c) 0.0-80.9 ug/dl d) 0.0-75.0 ug/dl e) 7.0-73.0 ug/dl f) 3.0-74.0 ug/dl g) 0.0-69.0 ug/dl h) Not given i) Not given j) Not given	a) 27.4 ug/dl b) 25.5 ug/dl c) 28.3 ug/dl d) 28.7 ug/dl e) 27.8 ug/dl f) 27.4 ug/dl g) 26.1 ug/dl h) 29.6 ug/dl i) 27.4 ug/dl j) 23.8 ug/dl Geometric	a) 7520 children b) 663 1-12 mo olds c) 1557 13-24 mo olds d) 1198 25-36 mo olds e) 1204 37-48 mo olds f) 1365 49-60 mo olds g) 1453 61-72 mo olds h) 3446 blacks i) 1803 Hispanics j) 1907 whites 39% sample population, 58% Blacks, 43% Hispanics, 23% whites, levels =or> 30 ug/dl 3.5% sample population =or> 50 ug/dl. Age and race independently important sources of variation. Difference between h) and j) significant. 80% cross-sectional sample of children, 1-72 mo old, New Haven, CT CONNECTICUT; AGE; CHILDREN; RACIAL STUDIES; SEX; BLOOD; LEAD; METALS; POPULATION EXPOSURE; URBAN AREAS	Quah, R.F. Stark, A.D. Meigs, J.W. DeLouise, E.R. 1982 Environmental Health Perspectives 44:159-164
7890 Blood		Colorimetry AAS	27,430	20.96-29.3 ug/dl	26.33 ug/dl Geometric	Range of geometric means from 15 socioeconomically similar areas. Higher levels associated with lower education, lower income, and increased proportion of single parent families Black children <7 yr old, 1972-78, Detroit, MI MICHIGAN; AGE; CHILDREN; RACIAL STUDIES; BLOOD; LEAD; METALS; POPULATION EXPOSURE	Talbott, E.O. Burgess, R.A. Murphy, F.A. Muller, L.H. 1983 American Journal of Public Health 73(11):1288-1290

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Lead
7439-92-1
Pb
AEW 327.2, BP 327.4 C, BP 1748 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7980 Blood		Dithizone	a) 102 b) 47 c) 53 d) 15 e) 17 f) 41 g) 81 h) 49 i) 63	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given	a) 55.9 +or- 21.3 ug/dl b) 31.7 +or- 17.2 ug/dl c) 54.0 +or- 16.6 ug/dl d) 48.8 +or- 20.0 ug/dl e) 53.8 +or- 16.3 ug/dl f) 45.6 +or- 26.8 ug/dl g) 47.4 +or- 18.2 ug/dl h) 56.7 +or- 18.1 ug/dl i) 65.2 +or- 13.6 ug/dl	a) Assembly workers, air Pb 0.38 +or- 0.21 mg/cu m, 102 cases b) Casting workers, air Pb 0.38 +or- 0.05 mg/cu m, 47 cases c) Pasting workers, air Pb 0.17 +or- 0.04 mg/cu m, 53 cases d) Refining workers, air Pb 0.87 +or- 0.03 mg/cu m, 15 cases e) Lead powder workers, air Pb 0.21 +or- 0.08 mg/cu m, 17 cases f) Workers from a)-e), employed <2 yr g) Workers from a)-e), employed 2-4 yr h) Workers from a)-e), employed 4-6 yr i) Workers from a)-e), employed >6 yr Significant difference between f),i) ($p<0.05$). Percentage of workers with blood Pb >60 ug/dl: a) 46.1%, b) 31.9%, c) 35.8%, d) 20.0%, e) 35.3%. Workers, 28.4 yr old, employed 4.6 yr, storage battery factory, Korea KOREA; ADULTS; BLOOD; LEAD; METALS; AIR POLLUTION; BIOACCUMULATION; INDUSTRIAL PLANTS; INHALATION; OCCUPATIONAL HAZARDS	Lee, B.K. 1982 British Journal of Industrial Medicine 39:283-289
7981 Blood						Review. Assessment of clinical use of laboratory determinations for metals, anticonvulsive agents, and cardiovascular drugs. ADULTS; AGE; CHILDREN; ANEMIA; BONE DISEASES; DISEASES; MENTAL RETARDATION; METAL POISONING; NUTRITIONAL DEFICIENCIES; SKIN DISEASES; BLOOD; BLOOD PLASMA; BLOOD SERUM; LIVER; URINE; ANTIARRHYTHMIC AGENTS; ANTICONVULSANTS; DIURETICS; DRUG THERAPY; DRUGS; HYPNOTICS; MUSCLE RELAXANTS; SEDATIVES; TRANQUILIZERS; REVIEW; COPPER; DIAZEPAM; IRON; LEAD; LITHIUM; THEOPHYLLINES; ZINC; PAPERS	Weiss, H.B. Rosenthal, I.M. 1978 Journal of Analytical Toxicology 2:166-171

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7902 Blood		Fluorometry	14	a) 39-42 ug/dl b) 28-35 ug/dl c) 6-16 ug/dl	a) Not given b) Not given c) 10 ug/dl	a) 11 yr old severely retarded Indian boy with pica b) 12 yr old severely retarded Caucasian girl with pica c) 12 other children, 8 with probable Fe deficiency Children with erythrocyte protoporphyrin >or= 40 ug/dl Severely retarded institutionalized children and city school children, Calgary, Canada. CANADA; CHILDREN; MENTAL RETARDATION; BLOOD; LEAD; METALS; PORPHYRINS; BIOACCUMULATION; PAINTS; PICA	Paton, T.J. Cembrowski, G.S. 1982 Journal of the Canadian Medical Association 127:860-862
7903 Blood	Ingestion					Reviewed Pb blood levels are compared with estimated exposure levels. Tolerable intake calculated for children of varying ages and body sizes Neurological and renal effects are reviewed UNITED STATES; ADULTS; CHILDREN; KIDNEY DISEASES; MENTAL POISONING; NEUROLOGIC MANIFESTATIONS; BLOOD; FECES; REVIEW; LEAD; METALS; PICA	McKaffey, K.R. 1977 Pediatrics 58(3):448-456
7904 Blood		AAS		a) 17-42 ug/dl b) 17-39 ug/dl c) 14-38 ug/dl d) 14-36 ug/dl	a) 26.38 +or- 5.32 ug/dl b) 25.79 +or- 5.48 ug/dl c) 25.29 +or- 5.53 ug/dl d) 24.59 +or- 5.77 ug/dl	a) Baseline b) Week 4 c) Week 8 d) Week 12 Subjects received either a placebo or methylphenidate. No significant differences found, indicating that blood Pb levels were stable. 4.3-11.6 yr olds, 66% blacks, 14% whites, 17% hispanics and 3% other groups. All outpatients at Downstate Medical Center, Kings County Hospital, New York. NEW YORK; CHILDREN; BLOOD; MEASUREMENT METHODS; LEAD; METALS	David, O.J. Wintrob, M.L. Arcoleo, C.G. 1982 Archives of Environmental Health 37(3):147-150

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7905 Blood			1036	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given	a) 12 ug/100 ml b) 22 ug/100 ml c) 24 ug/100 ml d) 40 ug/100 ml e) 23 ug/100 ml f) 30 ug/100 ml g) 25 ug/100 ml h) 18 ug/100 ml i) 23 ug/100 ml	a) <6 yr old b) <6 yr old c) 6-6 yr old d) 6-6 yr old e) 6-10 yr old f) 6-12 yr old g) 12-10 yr old h) >10 yr old i) >10 yr old Urban district (a), c), e), and h)) and industrial district (b), d), f), g), i)) less than 1 km from factor. High correlation (r=0.96) between Pb in blood and tooth. Rate constant for uptake into tooth (0.065 ppm/yr)/(ug Pb)/(100 ml blood). Data estimated from graph. Residents of Moretusburg and Hoboken districts of Antwerp, Belgium BELGIUM; ADULTS; AGE; CHILDREN; SEX; BLOOD; COMPARATIVE EVALUATIONS; LEAD; METALS; INDUSTRIAL AREAS; URBAN AREAS	Stoeckhut, A. 1982 Archives of Environmental Health 37(6):226-231
7906 Blood		AAS	83	a) 6.8-33.8 ug/100 ml b) 13.6-31.9 ug/100 ml c) 6.8-33.8 ug/100 ml	a) 15.3 ug/100 ml b) 19.7 ug/100 ml c) 14.2 ug/100 ml Geometric means in b),c)	a) Smelter area, 83 children b) 5 children, fathers occupationally exposed c) 73 children, fathers not occupationally exposed Significant difference between b),c) (P=0.05), linear correlation between tooth and blood Pb (r=0.47, p<0.001) Children from smelter area, born 1967-74. Samples collected Aug-Dec 1980 (mean atmospheric dustfall 1-3.6 mg Pb/sq m/day). Federal Republic of Germany GERMANY; AGE; CHILDREN; BLOOD; TEETH; LEAD; METALS; AIR POLLUTION; BIOACCUMULATION; INDUSTRIAL POLLUTION; POPULATION EXPOSURE; RURAL AREAS; SMELTERS; URBAN AREAS	Beers, U. Brockhaus, A. Winneke, G. Freier, I. Jermann, E. Kramer, U. 1982 International Archives of Occupational and Environmental Health 50:139-151

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Lead
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Pb
Atm 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7967 Blood			a) 175 b) 477	a) >or= 60 ug/dl b) < 60 ug/dl	a) Not given b) Not given	a) 42.8 yr olds, employed 15.2 yr b) 45.4 yr olds, employed 17.1 yr means. Workers in Montana, Missouri, Texas, Nebraska, New Jersey and Indiana. Exposure during smelting, refining, metal recovery. No significant differences in health as determined by measurements of blood pressure, blood chemistry, body weight or sick days. INDIANA; MISSOURI; MONTANA; NEBRASKA; NEW JERSEY; TEXAS; BLOOD; INDUSTRIAL MEDICINE; LEAD; INDUSTRIAL ATMOSPHERES; INDUSTRIAL PLANTS; OCCUPATIONAL HAZARDS; SMELTERS	Ramirez-Cervantes, B. Embree, J.W. Hine, C.H. Nelson, K.W. Verner, H.O. Putnam, R.D. 1970 Journal of Occupational Medicine 20:610-617
7968 Blood			a) 62 b) 80	a) 19.8-66.90 ug/100 ml b) 5.5-34.2 ug/100 ml	a) 38.7 ug/100 ml b) 16.6 ug/100 ml	a) Exposed to Pb and Cd simultaneously b) Unexposed controls 62 smelter workers with mean employment of 15.3 yr, mean age 48.4 yr, 53 smokers. Controls, mean age 38.6 yr. Heme biosynthesis inhibited by Pb. Renal function impaired by Cd. No synergistic effects. KIDNEY DISEASES; OCCUPATIONAL DISEASES; BLOOD; URINE; CADMIUM; LEAD; METALS; INDUSTRIAL PLANTS; SMELTERS	Buchet, J.-P. Roels, H. Bernard, A. Lauwerys, R. 1981 Journal of Occupational Medicine 23(5):340-352

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Lead
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Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7909 Blood		AAS	400	2-29 ug/100 ml	14 +or- 5 ug/100 ml	Inverse relationship between blood Pb (PbB) and distance of home from city center (p=0.001). PbB correlated with socioeconomic status (p<0.05). No relationships of PbB with: performance on tests (intelligence and motor), hyperactivity, irritability, or fathers' occupations. Children with lower PbB performed better on eye-hand coordination test. 4-5 yr old children born August 1975, September 1976, February 1977, The Women's Hospital Sydney, Australia AUSTRALIA; CHILDREN; BLOOD; LEAD; METALS; POPULATION EXPOSURE; URBAN AREAS	McBride, W.G. Black, B.P. English, B.J. 1982 Medical Journal of Australia 2:26-29
7910 Blood			1	a) Not applicable b) Not applicable c) Not applicable	a) 57 ug/dl b) 32 ug/dl c) 21 ug/dl	a) Level at routine screening. Patient, given 150 mg Ca-disodium edetate and 40 mg dimercaprol, IM every 4 hr for 7 days b) 2 wk after therapy c) 3 wk after therapy 26 mo old black girl, NY At 3 wk, severe acute renal failure caused by either chelation therapy and/or Pb poisoning. Renal failure reversed over 12 days. Symptoms included anorexia, vomiting, lethargy, and pallor. NEW YORK; CASE HISTORIES; CHILDREN; KIDNEY DISEASES; BLOOD; DRUG THERAPY; LEAD; METALS	Khan, A.J. Patel, V. Rafeeq, M. Myerson, A. Kumar, K. Evans, H.E. 1983 Journal of Pediatrics 102(1):167-169

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Lead
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Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7911 Blood		AAS	398	a) 0.48-0.65 umol/l b) 0.56-0.80 umol/l c) 0.38-0.66 umol/l	a) 0.57 +or- 0.18 umol/l b) 0.63 umol/l c) 0.51 umol/l	a) All children, 398 cases b) Boys, 213 cases c) Girls, 185 cases Range of 13 age group means Mean monthly 24 hr air Pb: 0.51-18.95 and 0.29-4.37 ug/cu m 400 and 800 meters from plant, respectively. Exceeded safe air quality standards (1.5 ug/cu m). Pb levels within safe limits (<1.45 umol/l). Levels higher in boys and in younger age groups. 5-17 yr olds, attending school within 1 km and living within 8 km of Pb smelter, Nov-Dec 1980, Port Kembla, Australia AUSTRALIA; ADOLESCENTS; AGE; CHILDREN; SEX; BLOOD; LEAD; METALS; BIOACCUMULATION; INDUSTRIAL EMISSIONS; POPULATION EXPOSURE; SMELTERS	Gan, I. Schier, G. Innis, C. 1982 Medical Journal of Australia 2:372-376
7912 Blood	Inhalation	AAS	170	a) 42-132 ug/dl b) 33-344 ug/dl c) 60-174 ug/dl d) Not given	a) 74 ug/dl b) 90 ug/dl c) 93 ug/dl d) 18 +or- 5.9 ug/dl	a) Asymptomatic, 14 patients b) Focal central nervous system symptoms, 14 patients c) Encephalopathy, 19 patients d) Junior high school students, 11% had sniffed gasoline, 7.5% regularly, 147 cases Chelation therapy with Ca-disodium edotate and dimercaprol produced mean decrease of 36 +or- 23 ug/dl. 10-20 yr old Navajo Indians with Pb intoxication, caused by gasoline sniffing, July 1974-June 1980, and Indian junior high school students, May 1981, AZ Various symptoms: tremor, ataxia, chorea, nausea, vomiting, irritability, excitement, disorientation, hallucinations, seizures, somnolence or coma. One death. Others asymptomatic within 1-2 mo. ARIZONA; ADOLESCENTS; RACIAL STUDIES; LEAD POISONING; MENTAL POISONING; BLOOD; URINE; LEAD; METALS; GASOLINE; POPULATION EXPOSURE	Coulehan, J.L. Hirsch, W. Brillman, J. Sanandria, J. Welty, T.K. Colaiaco, P. Koros, A. Loher, A. 1983 Pediatrics 71(1):113-117

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LeaC
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Pb
AEW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7913 Blood		AAS	a) 72 b) 53	a) 18.6-85.2 ug/100 g b) 6.6-20.8 ug/100 g	a) 55.4 ug/100 g b) 12.0 ug/100 g	a) Lead workers b) Controls Correlations made between Pb levels and immunoglobulins and complement. 16-58 yr old workers, battery plant and Pb smelter, mean 36.4 yr), exposed 1-34 yr (mean 10.3 yr). 21-54 yr old controls, West Germany GERMANY; ADULTS; BLOOD; LEAD; METALS; OCCUPATIONAL HAZARDS; SMELTERS	Boers, U. Stiller-Winkler, R. Idel, H. 1982 Environmental Research 29:351-357
7914 Blood		Dithizone	a) 31 b) 50	a) Not given b) Not given	a) 36.0 ug/dl b) 4.29 ug/dl Geometric means	a) Pb workers b) Controls Significant difference ($p<0.01$). Positive correlation with erythrocyte Na/K-ATPase activity ($r=0.473, p<0.01$) in workers. 23-73 yr old workers in scrap Pb refinery. 19-65 yr old controls employed in railway construction. ADULTS; BLOOD; ERYTHROCYTES; URINE; ENZYMES; LEAD; OCCUPATIONAL HAZARDS	Karai, I. Fukumoto, K. Horiguchi, S. 1982b British Journal of Industrial Medicine 39:290-294
7915 Blood		AAS	a) 67 b) 121 c) 40 d) 35	a) Not given b) Not given c) Not given d) Not given	a) 186.9 +or- 68.5 ug/l b) 245.8 +or- 61.7 ug/l c) 669.1 +or- 126.1 ug/l d) 809.0 +or- 135.4 ug/l	a) Unexposed controls b) Steelworkers not directly exposed, air Pb 0.003-0.093 mg/cu m c) Battery plant workers, air Pb 0.04-4.25 mg/cu m d) Pb smelter workers, air Pb 0.13-7.72 mg/cu m Significant differences 17-63 yr old Caucasians, Canada CANADA; ADULTS; BLOOD; COMPARATIVE EVALUATIONS; LEAD; METALS; OCCUPATIONAL HAZARDS; SMELTERS	Lebrecho, P. D'Am, A. 1982 International Archives of Occupational and Environmental Health 51:35-44

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Lead
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Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1052 C, 1 mm Hg at 970 C, 10 mm Hg at 1162 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7916 Blood	Ingestion		1	Not applicable	330 ug/dl	Autopsy. Pb certain weight found in stomach. Ingested >3 mo. before death. 2 yr old girl Vomiting, lethargy, irritability, fever, cerebral edema AUTOPSIES; CASE HISTORIES; CHILDREN; LEAD POISONING; MENTAL DISORDERS; BLOOD; LEAD; MENTAL; ACCIDENTAL POISONING; HUMAN DISEASE	Blank, H. Morisson, J. 1983 Journal of the American Medical Association 249(16):2176-2177
7917 Blood	Ingestion Inhalation	AAS	7378	0.553-0.992 umol/l	0.738 umol/l	74(1%) >1.7 umol/l, one >3.0 umol/l Range of means for residents of 36 towns. Levels highest in town with soft water and high drinking water Pb. Levels increased by cigarette smoking and alcohol consumption. Estimated mean contribution to individual blood Pb: 9%, cigarettes, 8%, alcohol, 6%, Pb in drinking water 40-59 yr old men, Jan 1978-June 1980, UK UNITED KINGDOM; ADULTS; AGE; BLOOD; LEAD; MENTAL; ALCOHOLIC BEVERAGES; DRINKING WATER; SMOKING	Pocock, S.J. Shaper, A.G. Walker, M. Wale, C.J. Clayton, B. Delves, T. Lacey, R.F. Packham, R.F. Powell, P. 1983 Journal of Epidemiology and Community Health 37:1-7
7918 Blood		AAS	673	a) 11-367 ug/l b) Not given c) Not given d) Not given	a) 72 ug/l b) 63 ug/l c) 70 ug/l d) 80 ug/l Medians	a) All 673 cases b) Housewives, 164 cases c) Former smokers, 111 cases d) Current smokers, 188 cases Levels higher in men, smokers, subjects living in areas of high traffic density. Positive correlation with alcohol consumption, none with age. 19-72 yr olds, Stockholm and Vasteras, Sweden, 1980 SWEDEN; ADULTS; AGE; SEX; BLOOD; CADMIUM; LEAD; MENTAL; AIR POLLUTION; ALCOHOLIC BEVERAGES; BIOACCUMULATION; GASOLINE; POPULATION MONITORING; SMOKING; URBAN AREAS	Elinder, C.G. Friberg, L. Lind, B. Persson, H. 1982 Environmental Research 28:233-253

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Lead
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Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7919 Blood		AAS	a) 11 b) 82 c) 39 d) 95	a) 6-17 ug/100 ml b) 6.9-25 ug/dl c) 10.0-70 ug/dl d) 4-85 ug/dl	a) 12 +or- 2.8 ug/100 ml b) 15.9 ug/dl c) Not given d) Not given	a) Controls b) Metal workers c) Firing range workers d) Pb-Zn mine workers 6-60 yr old controls. Metal workers, 19-60 yr old, sporadically exposed to fumes during welding. Firing range instructors and armorers, 20-52 yr old. Caucasian and Inuit miners and millworkers, 19-59 yr old, Canada CANADA; ADULTS; CHILDREN; BLOOD; CADMIUM; LEAD; MERCURY; ZINC; INDUSTRIAL ATMOSPHERES; MINING; OCCUPATIONAL HAZARDS; SMELTERS	Parent, J.-P. Wigfield, D.C. 1982 International Archives of Occupational and Environmental Health 51:15-24
7920 Blood		AAS	a) 143 b) 240 c) 200 d) 73 e) 100 f) 201 g) 200 h) 65 i) 206 j) 212 k) 100 l) 192	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given	a) 150 +or- 1.3 ug/l b) 60 +or- 1.4 ug/l c) 130 +or- 1.6 ug/l d) 179 +or- 1.6 ug/l e) 107 +or- 1.4 ug/l f) 82 +or- 1.5 ug/l g) 60 +or- 1.4 ug/l h) 225 +or- 1.4 ug/l i) 96 +or- 1.3 ug/l j) 72 +or- 1.5 ug/l k) 75 +or- 1.5 ug/l l) 92 +or- 1.6 ug/l Geometric means	a) Belgium, Brussels b) China, Beijing c) India, Ahmedabad d) India, Bangalore e) India, Calcutta f) Israel, Jerusalem g) Japan, Tokyo h) Mexico, Mexico City i) Peru, Lima j) Sweden, Stockholm k) United States, Baltimore l) Yugoslavia, Zagreb Level in men about 30% higher than women, smokers about 10% higher than nonsmokers. Elementary school teachers from urban areas. BELGIUM; CHINA; INDIA; ISRAEL; JAPAN; MARYLAND; MEXICO; PERU; SWEDEN; UNITED STATES; YUGOSLAVIA; ADULTS; AGE; AUTOPSIES; CHILDREN; SEX; BLOOD; KIDNEYS; COMPARATIVE EVALUATIONS; CADMIUM; LEAD; METALS; BIOACCUMULATION; GASOLINE; POPULATION EXPOSURE; SMOKING; URBAN AREAS	Friberg, L. Vostor, M. 1983 Environmental Research 30:95-120

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7921 Blood		AAS	a) 20 b) 20	a) Not given b) Not given	a) 66.25 +or- 14.93 ug/dl b) 20.65 +or- 4.71 ug/dl	a) Pb workers b) Controls Significant difference (p<0.001). 23-64 yr old (mean 40.9 yr) workers, exposed 4-26 yr and age-matched controls, Italy Decreased erythrocyte membrane fluidity not correlated with blood Pb levels. ITALY; ADULTS; BLOOD; ERYTHROCYTES; URINE; LEAD; METALS; BIOACCUMULATION; OCCUPATIONAL HAZARDS	Valentino, M. Fiorini, R.M. Curatolo, G. Governa, M. 1982 International Archives of Occupational and Environmental Health 51:105-112
7922 Blood		AAS	27,001	Not given	378 (5.4 ug/dl)	Average reduction in levels from Feb. 1976 through Feb. 1980 Significant (P<0.001) correlation between blood and gasoline levels 6 mo-74 yr olds from 64 areas of US UNITED STATES; ADOLESCENTS; ADULTS; CHILDREN; INFANTS; LEAD POISONING; BLOOD; COMPARATIVE EVALUATIONS; LEAD	Annest, J.L. Pirkle, J.L. Makuc, D. Neese, J.W. Bayse, D.D. Kovar, M.G. 1983 New England Journal of Medicine 308:1373-1377
7923 Blood		AAV	a) 27 b) 21 c) 15 d) 7	a) Not given b) Not given c) Not given d) Not given	a) 19 +or- 4 ug/dl b) 16 +or- 2 ug/dl c) 13 +or- 2 ug/dl d) 18 +or- 4 ug/dl S.E.	a) Essential hypertension and renal disease b) Essential hypertension, no renal disease c) Hypertension due to renal disease d) Renal disease, no hypertension No current occupational exposure. Possible exposure from industrial sources or from consumption of "moonshine" in 24 patients in a), 16 in b), 15 in c). No symptoms of acute poisoning. 23-70 yr olds, Veterans Hospital, New Jersey. 30 of the 48 patients with essential hypertension were black, had renal impairment. NEW JERSEY; ADULTS; HYPERTENSION; LEAD POISONING; BLOOD; URINE; DISEASES; KIDNEYS; LEAD	Batuman, V. Landy, E. Maesaka, J.K. Wedeen, R.P. 1983 New England Journal of Medicine 309:17-21

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Lead
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Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7924 Blood		AAS	a) 169 b) 133 c) 87	a) Not given b) Not given c) Not given	a) 32.7 ug/100 ml b) 50.9 ug/100 ml c) 51.6 ug/100 ml	a) Cu smelter workers, mean Zn protoporphyrin (ZPP) 57.8 ug/100 ml b) Autobody shop workers, mean ZPP 104 ug/100 ml c) Secondary Pb smelter workers, mean ZPP 102.3 ug/100 ml BLOOD; LEAD; PORPHYRINS; AUTOMOTIVE; OCCUPATIONAL HAZARDS; SMELTERS	Valciukas, J.A. Lilis, R. 1982 International Archives of Occupational and Environmental Health 51:1-14
7925 Blood				Not given	57 ug/100 ml	Workers with light exposure, 1965-66. 9.2% with > 80 ug/100 ml. (Similar values for workers with heavy exposure, 1975-76.) Retirees, lead acid battery plant. Majority had worked > 25 yr. Excessive numbers of deaths from cerebrovascular accidents and renal disease in retirees dying between 1935 and 1976. LEAD; METALS; OCCUPATIONAL EXPOSURE; INDUSTRIAL PLANTS; OCCUPATIONAL HAZARDS; HEART DISEASES; KIDNEY DISEASES	Malcolm, D. Barnett, H.A.R. 1982 British Journal of Industrial Medicine 39:404-410
7926 Blood			29	a) Not given b) Not given	a) 5.6 +or- 2.3 ug/100 ml b) 61.2 +or- 18.2 ug/100 ml	a) Controls b) Exposed workers delta-Aminolevulinic acid dehydratase increased with exposure Employees in ingot and battery factories, controls ADULTS; BLOOD; COMPARATIVE EVALUATIONS; LEAD; LEVULINIC ACIDS; INDUSTRIAL POLLUTION; OCCUPATIONAL HAZARDS	Fujita, H. Sato, K. Sano, S. 1982 International Archives of Occupational and Environmental Health 50:287-297
7927 Blood, fetal			a) 500 b) 500	a) Not given b) Not given	a) 5 ug/dl b) 1.5 ug/dl	a) August 1979 b) April 1981 Umbilical cord blood. Levels positively correlated with sales of leaded gasoline in MA for 0-2 mo after birth (p<0.001) Births, Boston, MA hospital MASSACHUSETTS; NEWBORN; BLOOD; LEAD; METALS; BIOACCUMULATION; DRINKING WATER; GASOLINE	Rabinowitz, M. Needleman, H.L. 1983 Lancet 1(8316-8315):63

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Lead
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Pb
AEW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7926 Body	Dermal	Radiometry	8	a) 0.006-0.168% of dose b) -0.086-0.40% of dose c) -0.03-0.958% of dose d) -0.01-0.507% of dose e) 0.001-0.061% of dose f) 0.010-0.08% of dose g) -0.022-0.325% of dose h) -0.060-0.389% of dose	a) 0.069 +or- 0.053% of dose b) 0.177 +or- 0.146% of dose c) 0.180 +or- 0.338% of dose d) 0.257 +or- 0.464% of dose e) 0.022 +or- 0.021% of dose f) 0.037 +or- 0.026% of dose g) 0.083 +or- 0.121% of dose h) 0.142 +or- 0.173% of dose	a) 24 hr samples after test material applied (wet) b) 48 hr samples c) 24 hr samples after skin lightly scratched, test material applied (dry) d) 48 hr samples e) 24 hr samples after test material applied (cream) f) 48 hr samples g) 24 hr samples after test material applied (dry) h) 48 hr samples i) 48 hr samples after 2 ml Pb-203, activity 2.7-5.4 kBq (110-215 uCi), IV Measured by counting over subject's calf and converting to whole body levels. Test material: hair darkening cosmetic preparations, 0.1 ml of lotion (6 mmol Pb acetate/l) or 0.1 g of cream (9 mmol Pb/kg) spiked with 0.74 mBq (20 uCi) Pb-203 acetate, exposures for 12 hr. 20-35 yr olds, ht 1.67-1.79 m, wt 55.7-67.0 kg ADULTS; BLOOD; BODY; URINE; LEAD; LEAD COMPOUNDS; COSMETICS; RADIOISOTOPES; RADIONUCLIDES	Moore, H.B. Meredith, P.A. Watson, W.S. Sumner, D.J. Taylor, H.E. Goldberg, A. 1988 Food and Cosmetics Toxicology 16:399-405

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Lead
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Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7939 Bone		AAS	a) 26 b) 40 c) 121 d) 11 e) 14 f) 41 g) 3 h) 19 i) 36 j) 21	a) 0.06-1.9 ug/g b) 0.1-8.1 ug/g c) 0.9-13.9 ug/g d) 2.8-6.5 ug/g e) 1.1-12.8 ug/g f) 0.1-6.5 ug/g g) 1.3-3.9 ug/g h) 0.7-16.7 ug/g i) 1.53-13.11 ug/g j) 1.30-17.62 ug/g a)-h) Dry wt i)-j) Wet wt	a) 0.56 ug/g b) 1.92 ug/g c) 4.7 ug/g d) 4.46 ug/g e) 4.61 ug/g f) 1.42 ug/g g) 2.37 ug/g h) 5.11 ug/g i) 5.96 ug/g j) 3.96 ug/g a)-h) Dry wt i)-j) Wet wt	a) Peru, desert, 500-1000 AD (low exposures) b) Prehistoric Bavaria, 10-5th centuries BC c) Augsburg, Bavaria, 4-5th century AD (hihh Pb use) d) Augsburg, 7th century AD, citizens (wealthy life style) e) Augsburg, 11/12th century (Sn use), 17/18th century AD (Pb used), monks f) Regensburg, Bavaria, 8/9th century AD, citizens (less wealthy life style, lower Pb use) g) Regensburg, 10th century AD, canonesses h) Regensburg, 12th century AD, canonesses i) Urban Munich, 1977, autopsies j) Rural Bavaria, 1977, autopsies Early samples from femur, cranium. Modern samples also from cranium, sternum, pelvis as well. Statistics and comparisons also included. 0->60 yr olds GERMANY; PERU; ADOLESCENTS; ADULTS; AGE; AUTOPSIES; CHILDREN; SEX; BONES; COMPARATIVE EVALUATIONS; LEAD; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Brauch, G.A. 1982 Science of the Total Environment 24:199-231
7939 Bone		Dithizone	46	a) 6.61-20.36 ppm b) 7.37-21.76 ppm c) 4.06-9.77 ppm d) 2.88-6.66 ppm	a) Not given b) Not given c) Not given d) Not given	a) Tibia. 20-29 and 70-79 yr olds b) Skull. 20-29 and 70-79 yr olds c) Rib. 20-29 and 60-69 yr olds d) Vertebrae. 30-59 and 60-69 yr olds Autopsies. Levels lowest in samples with osteoporotic changes Deaths from traumatic, medical or chemical causes, Ohio. OHIO; AUTOPSIES; DISEASES; BONES; HEART; KIDNEYS; LIVER; LEAD	Gross, S.B. Pfitzer, E.A. 1974 Trace Substances in Environmental Health - VIII. A Symposium. D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7931 Bone		AAS	35	a) 52.4-34 ppm b) 43.4-31 ppm c) 48.6-29.6 ppm d) 44.4-31 ppm e) 56.9-30 ppm f) 42.3-27 ppm	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) Total femur-rib, Middle Woodland Gibson site b) Total femur-rib, Late Woodland Lodders site c) Female femur-rib, Middle Woodland Gibson site d) Female femur-rib, Late Woodland Lodders site e) Male femur-rib, Middle Woodland Gibson site f) Male femur-rib, Late Woodland Lodders site Range of means Skeletal remains LEAD; MAGNESIUM; MANGANESE; POTASSIUM; SODIUM; STRONTIUM; ZINC; ALUMINUM; CALCIUM; IRON; ILLINOIS; CADAVERS; BONES	Lambert, J.B. Vlasak, S.M. Thomets, A.C. Buikstra, J.B. 1982 American Journal of Physical Anthropology 59:289-294
7932 Hair		AAS	a) 23 b) 67	a) 1.01-91.42 ppm b) 0.50-35.59 ppm	a) 24.61 +or- 25.58 ppm b) 13.19 +or- 0.59 ppm	a) Urban b) Rural Means significantly different ($p<0.01$) Urban and rural children, 1-4 yr old (mean 2.4 yr) and 4-16 yr old (mean 11.3 yr), respectively, 98% with mild learning problems, from middle to low socioeconomic levels, TN TENNESSEE; ADOLESCENTS; CHILDREN; HAIR; ARSENIC; CADMIUM; LEAD; MERCURY; METALS; NICKEL; AGRICULTURE; BIOACCUMULATION; INDUSTRIAL AREAS; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Folio, M.R. Hennigan, C. Errera, J. 1982 Environmental Pollution (Series A) 29:261-269
7933 Hair		X-ray spectrum	1	5.4-15.0 ug/g	Not given	5 measurements at counting times of 300-5000 sec, 1 mm section of single hair, linear density 6.6 ug/mm CANADA; IRAQ; ADULTS; HAIR; MEASUREMENT METHODS; CALCIUM; COPPER; IRON; LEAD; MERCURY; ZINC; BIOACCUMULATION; DIETS; FISHER; FOOD CONTAMINATION	Verikara, V.Y. Jackson, D.A. French, W.R. Thompson, A.C. Jaklovic, J.M. 1982 Analytical Chemistry 54:1844-1848

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE SCORE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7934 Hair						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; URINE; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hopps, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).
7935 Hair		AAS	149	a) Not given b) Not given c) Not given d) Not given e) 0-177.99 ppm	a) 32 ppm b) 15 ppm c) 9 ppm d) 6 ppm e) 7.56 ppm	a) Rural area, 52 cases b) Population <2,500, 40 cases c) Population 2,500-9,000, 11 cases d) Population 10,000-25,000, 46 cases e) a)-d), 149 cases Levels in boys significantly higher than in girls ($p<0.002$). Levels in blacks significantly higher than in whites ($p<0.0001$). Significant linear trend of decreasing Pb with increasing urbanicity ($p<0.02$). Levels significantly correlated with both intelligence and school achievement scores, but not with motor impairment scores. a)-d) estimated from graph. e) calculated from log values 5-16 yr old public school students, MD MARYLAND; CHILDREN; RACIAL STUDIES; SEX; HAIR; CADMIUM; LEAD; METALS; BIOACCUMULATION; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Thatcher, R.W. Lester, M.L. McAlaster, R. Horst, R. 1982 Archives of Environmental Health 37(3):159-166

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7936 Heart		Dithizone	a) 6 b) 6 c) 8 d) 9 e) 11 f) 6	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.40 +or- 0.10 ppm b) 0.86 +or- 0.71 ppm c) 0.75 +or- 0.16 ppm d) 1.14 +or- 0.46 ppm e) 2.83 +or- 2.55 ppm f) 3.32 +or- 2.10 ppm Wet wt	a) 20-29 yr olds b) 30-39 yr olds c) 40-49 yr olds d) 50-59 yr olds e) 60-69 yr olds f) 70-79 yr olds Autopsies: Levels increased with incidence of atherosclerosis. Deaths from traumatic, medical or chemical causes, Ohio. OHIO; AUTOPSIES; DISEASES; BONES; HEART; KIDNEYS; LIVER; LEAD	Gross, S.B. Pfitzer, E.A. 1974 Trace Substances in Environmental Health - VIII. A Symposium. D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).
7937 Kidney		Dithizone	a) 6 b) 6 c) 8 d) 9 e) 11 f) 6	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 1.16 +or- 0.54 ppm b) 1.28 +or- 0.62 ppm c) 0.83 +or- 0.22 ppm d) 0.68 +or- 0.33 ppm e) 0.61 +or- 0.24 ppm f) 0.63 +or- 0.31 ppm Wet wt	a) 20-29 yr olds b) 30-39 yr olds c) 40-49 yr olds d) 50-59 yr olds e) 60-69 yr olds f) 70-79 yr olds Autopsies, cortex. Levels lowest in cases with nephrosclerosis. Deaths from traumatic, medical or chemical causes, Ohio. OHIO; AUTOPSIES; DISEASES; BONES; HEART; KIDNEYS; LIVER; LEAD	Gross, S.B. Pfitzer, E.A. 1974 Trace Substances in Environmental Health - VIII. A Symposium. D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).
7938 Liver		Dithizone	a) 6 b) 6 c) 8 d) 9 e) 11 f) 6	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 1.59 +or- 0.62 ppm b) 0.87 +or- 0.58 ppm c) 0.98 +or- 0.60 ppm d) 0.87 +or- 0.30 ppm e) 0.84 +or- 0.32 ppm f) 0.98 +or- 0.61 ppm Wet wt	a) 20-29 yr olds b) 30-39 yr olds c) 40-49 yr olds d) 50-59 yr olds e) 60-69 yr olds f) 70-79 yr olds Autopsies Levels lowest in samples with fatty infiltration Deaths from traumatic, medical or chemical causes, Ohio. OHIO; AUTOPSIES; DISEASES; BONES; HEART; KIDNEYS; LIVER; LEAD	Gross, S.B. Pfitzer, E.A. 1974 Trace Substances in Environmental Health - VIII. A Symposium. D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7939 Milk		AAS	a) 16 b) 31 c) 23 d) 22 e) 31 f) 24 g) 32	a) 0.08-0.18 ug/g b) 0.05-0.19 ug/g c) 0.08-0.39 ug/g d) 0.06-0.23 ug/g e) 0.04-0.39 ug/g f) 0.06-0.30 ug/g g) 0.09-0.19 ug/g	a) 0.13 ug/g b) 0.11 ug/g c) 0.15 ug/g d) 0.14 ug/g e) 0.12 ug/g f) 0.12 ug/g g) 0.14 ug/g	a) Urban areas, poor living conditions, country A b) Urban areas, high standard of living, country A c) Rural areas, country A d) Urban areas, poor living conditions, country B e) Urban areas, high standard of living, country B f) Rural areas, country B g) Urban areas, poor living conditions, country C Lactating mothers of 2-9 mo old infants. 3 unspecified countries in widely varying areas of world. ADULTS; MILK; MEASUREMENT METHODS; LEAD; METALS; NICHEL; LACTATION; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Rica, C.C. Kirkbright, G.F. 1982 Science of the Total Environment 22:193-201

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7840 Tooth		AAS	387	a) 1.5-38.5 ug/g b) 1.6-9.4 ug/g c) 3.0-23.8 ug/g d) 1.5-31.2 ug/g	a) 7.1 ug/g b) 4.2 ug/g c) 8.56 ug/g d) 5.45 ug/g c),d) Geometric means	a) Smelter area, 302 children born 1967-74, teeth collected 1979 (mean atmospheric dustfall 1-3.6 mg Pb/sq m/day) b) Nonpolluted rural area, 85 children born 1968-71, teeth collected 1976 (mean airborne Pb 1.4 ug/cu m) c) 30 children of unskilled manual workers, smelter area d) 336 children of "white collar" and skilled manual workers, smelter area Deciduous teeth (incisors) Geometric means a), b) significantly different ($p<0.001$), c),d) significantly different ($p<0.001$), children of Pb-workers excluded. Levels higher when fathers occupationally exposed, increased with residence time in smelter area and degree of environmental pollution. Levels similar for brothers and sisters ($r=0.75$, $p<0.001$). Linear correlation between tooth, blood Pb ($r=0.47$, $p<0.001$) Residents of industrial area (Stolberg) and nonpolluted area (Gumersbach), Federal Republic of Germany GERMANY; AGE; CHILDREN; BLOOD; TEETH; LEAD; METALS; AIR POLLUTION; BIOACCUMULATION; INDUSTRIAL POLLUTION; POPULATION EXPOSURE; RURAL AREAS; SMELTERS; URBAN AREAS	Svare, U. Brockhaus, A. Winneke, G. Freier, I. Jermann, E. Kramer, U. 1982 International Archives of Occupational and Environmental Health 50:139-151
7841 Tooth		AAS	458	1.4-12.7 ppm	4.6 ppm	Incisors School age children from area of heavy industry and high air pollution, Duisburg, Federal Republic of Germany, 1978 GERMANY; CHILDREN; TEETH; LEAD; METALS; AIR POLLUTION; BIOACCUMULATION; INDUSTRIAL AREAS; INDUSTRIAL POLLUTION; POPULATION EXPOSURE; SMELTERS	Winneke, G. Brockhaus, A. Ermann, E.-G. 1983 International Archives of Occupational and Environmental Health 51:169-183

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7942 Urine	Injection Dermal	Radiometry	8	a) 0-0.032% of dose b) 0-0.036% of dose c) 0.002-0.190% of dose d) 0.003-0.012% of dose e) 0.0002-0.004% of dose f) 0.001-0.004% of dose g) 0-0.046% of dose h) 0.001-0.073% of dose i) 3.0-5.7% of dose	a) 0.0097 +or- 0.01105% of dose b) 0.0144 +or- 0.01205% of dose c) 0.062 +or- 0.005% of dose d) 0.007 +or- 0.004% of dose e) 0.0022 +or- 0.0017% of dose f) 0.0026 +or- 0.0013% of dose g) 0.012 +or- 0.015% of dose h) 0.020 +or- 0.023% of dose i) 4.9% of dose	a) 24 hr samples after test material applied (wet) b) 48 hr samples c) 24 hr samples after skin lightly scratched, test material applied (dry) d) 48 hr samples e) 24 hr samples after test material applied (cream) f) 48 hr samples g) 24 hr samples after test material applied (dry) h) 48 hr samples i) 48 hr samples after 2 ml Pb-203, activity 2.7-5.4 kBq (110-215 nCi), IV Test material: hair darkening cosmetic preparations, 0.1 ml of lotion (6 mmol Pb acetate/l) or 0.1 g of cream (9 mmol Pb/kg) spiked ivth 0.74 mBq (20 uCi) Pb-203 acetate, exposures for 12 hr. 20-35 yr olds, ht 1.67-1.79 m, wt 55.7-87.0 kg ADULTS; BLOOD; BODY; URINE; LEAD; LEAD COMPOUNDS; COSMETICS; RADIOISOTOPES; RADIONUCLIDES	Moore, M.R. Meredith, P.A. Watson, W.S. Sumner, D.J. Taylor, H.K. Goldberg, A. 1980 Food and Cosmetics Toxicology 18:399-405
7943 Urine		Polarography	a) 32 b) 30	a) Not given b) Not given	a) 61.0 ug/l b) 12.0 ug/l Geometric means	a) Pb workers b) Controls Significant difference ($p<0.01$) Osmotic fragility of red blood cells lower in a) than in b) ($p<0.05$), Significantly different hemolysis patterns ($p<0.05$) Scrap lead refinery employees (mean age 43.6 yr), pesticide manufacture workers (mean age 36.6 yr) ADULTS; BLOOD; URINE; LEAD; METALS; BIOACCUMULATION; INDUSTRIAL ATMOSPHERES; INDUSTRIAL PLANTS; INDUSTRIES; OCCUPATIONAL HAZARDS	Karai, I. Fukumoto, K. Horiguchi, S. 1982c International Archives of Occupational and Environmental Health 50:17-24

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7944 Urine		Polarography	a) 25 b) 38	a) Not given b) Not given	a) 109.1 ug/l b) 11.8 ug/l Geometric means	a) Pb workers b) Controls significant difference ($p<0.01$) Membrane cholesterol ($p<0.01$) and membrane cholesterol:phospholipids ratio ($p<0.05$) higher in a) than in b) Membrane phosphatidyl choline higher ($p<0.05$) and lysophosphatidyl choline lower ($p<0.05$) in a) than in b) Free cholesterol in plasma higher ($p<0.05$) in a) than in b) Pb refining workers (mean age 44.8 yr), railroad construction workers (mean age 44.1 yr) ADULTS; BLOOD; URINE; CHOLESTEROLS; LEAD; LIPIDS; METALS; BIOACCUMULATION; INDUSTRIAL ATMOSPHERES; INDUSTRIAL PLANTS; INDUSTRIES; OCCUPATIONAL HAZARDS	Kerai, I. Fukumoto, K. Horiguchi, S. 1983a International Archives of Occupational and Environmental Health 50:11-16
7945 Urine		AAS	a) 67 b) 43	a) 3.9-46.8 ug/g creatinine b) 3.7-32.6 ug/g creatinine	a) 11.3 ug/g creatinine b) 9.5 ug/g creatinine	a) Controls b) Workers exposed to Hg 0.5-16 yr (mean 9.3 yr) Data also for Hg and Cd Workers and controls in 3 factories using elemental Hg. Subjects matched with respect to age, socioeconomic status and job, 30.0-59.2 yr old, wt 58-99 kg, ht 162-199 cm, Belgium BELGIUM; ADULTS; NEUROLOGIC MANIFESTATIONS; BLOOD; URINE; CADMIUM; IRON; MERCURY; METALS; HEALTH HAZARDS; INDUSTRIAL PLANTS; OCCUPATIONAL HAZARDS; SMOKING	Roels, H. Lauwerys, R. Buchet, J.-P. Bernard, A. Berthels, A. Overbroye, H. Gennain, J. 1982 International Archives of Occupational and Environmental Health 50:77-93

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Lead
7439-92-1
Pb
AEW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7946 Urine		Dithizone	a) 102 b) 47 c) 53 d) 15 e) 17 f) 41 g) 61 h) 49 i) 63	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given	a) 134 +or- 103 ug/l b) 107 +or- 64 ug/l c) 115 +or- 60 ug/l d) 90 +or- 51 ug/l e) 93 +or- 49 ug/l f) 101 +or- 79 ug/l g) 95 +or- 74 ug/l h) 135 +or- 105 ug/l i) 148 +or- 68 ug/l	a) Assembly workers, air Pb 0.30 +or- 0.21 mg/cu m, 102 cases b) Casting workers, air Pb 0.20 +or- 0.05 mg/cu m, 47 cases c) Fusing workers, air Pb 0.17 +or- 0.04 mg/cu m, 53 cases d) Refining workers, air Pb 0.07 +or- 0.03 mg/cu m, 15 cases e) Lead powder workers, air Pb 0.21 +or- 0.08 mg/cu m, 17 cases f) Workers from a)-e), employed <2 yr g) Workers from a)-e), employed 2-4 yr h) Workers from a)-e), employed 4-6 yr i) Workers from a)-e), employed >6 yr Spot samples corrected to specific gravity of 1.016. Significant difference ($p<0.05$) between f),i). Workers, 20.4 yr old, employed 4.4 yr, storage battery factory, Korea KOREA; ADULTS; BLOOD; LEAD; METALS; AIR POLLUTION; BIOACCUMULATION; INDUSTRIAL PLANTS; INHALATION; OCCUPATIONAL HAZARDS	Lee, B.K. 1982 British Journal of Industrial Medicine 39:283-289
7947 Urine			a) 62 b) 60	a) 26.6-269.9 ug/g creatinine b) 2.5-42.9 ug/g creatinine	a) 74.53 ug/g creatinine b) 13.3 ug/g creatinine	a) Exposed to Pb and Cd simultaneously b) Unexposed controls 62 smelter workers with mean employment of 15.5 yr, mean age 48.6 yr, 53 smokers. Controls, mean age 38.6 yr. Heme biosynthesis inhibited by Pb. Renal function impaired by Cd. No synergistic effects. KIDNEY DISEASES; OCCUPATIONAL DISEASES; BLOOD; URINE; CADMIUM; LEAD; METALS; INDUSTRIAL PLANTS; SMELTERS	Buchet, J.-P. Roels, H. Bernard, A. Lauwerys, R. 1981 Journal of Occupational Medicine 23(5):340-352

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7982 Urine	Inhalation		18	233-3,226 ug/24 hr	Not given	Admission levels 10-20 yr old (mean age 16.6 yr) Navajo Indians with Pb intoxication caused by gasoline sniffing, July 1974-June 1980, AZ ARIZONA; ADOLESCENTS; RACIAL STUDIES; LEAD POISONING; METAL POISONING; BLOOD; URINE; LEAD; METALS; GASOLINE; POPULATION EXPOSURE	Coulehan, J.L. Hirsch, W. Brillman, J. Sanandria, J. Welty, T.K. Coleiano, P. Koros, A. Leber, A. 1983 Pediatrics 71(1):113-117
7989 Urine		Dithizone	a) 31 b) 50	a) Not given b) Not given	a) 180.1 ug/l b) 11.6 ug/l Geometric means	a) Pb workers b) Controls Significant difference (p<0.01) 23-73 yr old workers in scrap Pb refinery. 19-65 yr old controls employed in railway construction. ADULTS; BLOOD; ERYTHROCYTES; URINE; ENZYMES; LEAD; OCCUPATIONAL HAZARDS	Kosai, I. Fukumoto, K. Horiguchi, S. 1982b British Journal of Industrial Medicine 39:290-294
7950 Urine		AAS	a) 20 b) 20	a) Not given b) Not given	a) 112.25 +or- 42.61 ug/dl b) 31.35 +or- 8.83 ug/dl	a) Pb workers b) Controls Significant difference (p<0.001) 23-64 yr old (mean 40.9 yr) workers, exposed 6-26 yr and age-matched controls, Italy Decreased erythrocyte membrane fluidity not correlated with blood Pb levels. ITALY; ADULTS; BLOOD; ERYTHROCYTES; URINE; LEAD; METALS; BIOACCUMULATION; OCCUPATIONAL HAZARDS	Valentino, M. Fiorini, R.M. Curatolo, G. Severna, M. 1982 International Archives of Occupational and Environmental Health 51:105-112

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7951 Urine		ASV	a) 27 b) 21 c) 15 d) 7	a) Not given b) Not given c) Not given d) Not given	a) 860 +or- 181 ug b) 240 +or- 39 ug c) 647 +or- 65 ug d) 625 +or- 84 ug	a) Essential hypertension and renal disease b) Essential hypertension, no renal disease c) Hypertension due to renal disease d) Renal disease, no hypertension Levels 3 d after EDTA Pb mobilization test. a), b) significantly different ($p<0.001$. No current occupational exposure. Possible exposure from industrial sources or from consumption of "moonshine" in 24 patients in a), 16 in b), 15 in c). No symptoms of acute poisoning. 23-70 yr olds, Veterans Hospital, New Jersey. 80 with possible exposure, no acute poisoning NEW JERSEY; ADULTS; HYPERTENSION; LEAD POISONING; BLOOD; URINE; KIDNEYS; DISEASES; LEAD	Batuman, V. Landy, E. Maesaka, J.K. Wedeen, R.P. 1983 New England Journal of Medicine 309:17-21

Lithium
7439-93-2
Li
AtW 6.941, MP 180.54 C, BP 1336 C, VP 1 mm Hg at 723 C, 10 mm Hg at 890 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7951 Blood						Review. Assessment of clinical use of laboratory determinations for metals, anticonvulsive agents, and cardiovascular drugs. ADULTS; AGE; CHILDREN; ANEMIA; BONE DISEASES; DISEASES; MENTAL RETARDATION; METAL POISONING; NUTRITIONAL DEFICIENCIES; SKIN DISEASES; BLOOD; BLOOD PLASMA; BLOOD SERUM; LIVER; URINE; ANTIARRHYTHMIC AGENTS; ANTICONVULSANTS; DIURETICS; DRUG THERAPY; DRUGS; HYPNOTICS; MUSCLE RELAXANTS; SEDATIVES; TRANQUILIZERS; REVIEW; COPPER; DIAZEPAM; IRON; LEAD; LITHIUM; THEOPHYLLINES; ZINC; PAINTS	Weiss, H.B. Rosenthal, I.M. 1978 Journal of Analytical Toxicology 2:166-171

m-Phenylenediamine, 4-methoxy- (8 CI)
1,3-Benzenediamine, 4-methoxy- (9 CI)
615-05-4
C7-H10-N2-O
MW 138.1

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7953 Urine	Dermal	Radiometry	3-6	Not given	3.9 +or- 0.95 of dose	Absorbed through skin after 4 ug/sq cm applied in acetone for 24 hr. Calculated from 5 day urinary excretion COSMETICS; INDUSTRIAL CHEMICALS; URINE	Marzulli, F.N. Anjo, D.M. Maibach, H.I. 1981 Food and Cosmetics Toxicology 19:743-747

Magnesium
7439-95-4
Mg
AtW 24.305, MP 651 C, BP 1100 C, VP 1 mm Hg at 621 C, 10 mm Hg at 740 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7954 Blood	Ingestion	AAS	6	a) 1.8-2.1 mg/100 ml b) 1.9-2.0 mg/100 ml c) 1.8-2.3 mg/100 ml d) 1.8-2.3 mg/100 ml	a) 2.0 mg/100 ml b) 2.1 mg/100 ml c) 2.1 mg/100 ml d) 2.0 mg/100 ml	a) 0.9 g N/day and 100 mg Ca/day b) 12 g N/day and 106 mg Ca/day c) 24 g N/day and 86 mg Ca/day d) 12 g N/day and 1,004 mg Ca/day Intake for 15 days. Fasting sample at end of period. No variation from change in diet. 22-32 yr olds, 58-82 kg, 172-192 cm SWEAT; ADULTS; BLOOD; SKIN; URINE; CALCIUM; MAGNESIUM; PHOSPHORUS; PROTEINS; DIETS; METABOLISM	Chu, J-Y. Margen, S. Costa, F.M. 1975 American Journal of Clinical Nutrition 28(3):1028-1035
7955 Blood		AAS	23	1.64-5.74 mg/period	3.62 +or- 1.15 mg/period	Losses in menstrual blood BLOOD; NEBRASKA; ORAL CONTRACEPTIVES; COPPER; HEMOGLOBINS; IRON; MAGNESIUM; SINC; DIETS; MENSURATION	Umeren, J. Kies, C. 1982 Nutrition Reports International 26(4):717-726

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Magnesium
7439-95-4
Mg
AEW 24.305, MP 651 C, BP 1100 C, VP 1 mm Hg at 621 C, 10 mm Hg at 748 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7956 Blood, plasma		AAS	177	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given	a) 2.54 +or- 0.86 mg% b) 2.54 +or- 0.88 mg% c) 2.46 +or- 0.06 mg% d) 2.48 +or- 0.04 mg% e) 2.54 +or- 0.10 mg% f) 2.58 +or- 0.20 mg% g) 2.08 +or- 0.16 mg% h) 2.56 +or- 0.32 mg% i) 2.37 +or- 0.32 mg% j) 2.29 +or- 0.52 mg%	a) 8th mo pregnancy, 6 cases b) 6th mo pregnancy, 29 cases c) 7th mo pregnancy, 50 cases d) 8th mo pregnancy, 60 cases e) 9th mo pregnancy, 16 cases f) Family income <1000 Naira, 19 cases g) Family income 1000-2000 Naira, 111 cases h) Family income 2001-3000 Naira, 35 cases i) Family income 3001-4000 Naira, 5 cases j) Family income >4000 Naira, 7 cases Levels significantly different in g). (p<0.01) Pregnant women, Ibadan, Nigeria NUTRITIONAL DEFICIENCIES; BLOOD PLASMA; CALCIUM; MAGNESIUM; PHOSPHORUS; DIETS; FOODS; PREGNANCY; NIGERIA	Akingole, L.O. Akingole, I.O. 1982 Nutrition Reports International 26(5):887-893
7957 Blood, plasma	Ingestion	AAS RS	14	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 0.80 +or- 0.06 mmol b) 0.84 +or- 0.03 mmol c) 0.91 +or- 0.02 mmol d) 0.81 +or- 0.02 mmol e) 0.77 +or- 0.04 mmol f) 0.91 +or- 0.03 mmol g) 0.92 +or- 0.02 mmol h) 0.95 +or- 0.07 mmol S.E.	a) Infants fed mothers' milk, start of study, 6 cases b) At 1 wk, 6 cases c) At 2 wk, 6 cases d) At 4 wk, 5 cases e) Infants fed formula, start of study, 5 cases f) At 1 wk, 7 cases g) At 2 wk, 6 cases h) At 4 wk (+ supplements $NaHCO_3$, Ca-lactate), 5 cases Significant increase over 4 wk (p<0.05) in both groups. Premature infants, birth wt <1.3 kg, mean gestational age 30 wk, Canada PREMATURE INFANTS; CANADA; NUTRITIONAL DEFICIENCIES; BLOOD PLASMA; MILK; COMPARATIVE EVALUATIONS; CALCIUM; MAGNESIUM; MINERALS; PHOSPHORUS; POTASSIUM; SODIUM; FOODS; LACTATION	Atkinson, S.A. Bodde, I.C. Anderson, G.H. 1983 Journal of Pediatrics 103(1):99-106

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Magnesium
7439-95-4
Mg
AEW 24.305, MP 651 C, BP 1100 C, VP 1 mm Hg at 621 C, 10 mm Hg at 748 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7950 Bone		AAS	35	a) 4,590-5,670 ppm b) 2,910-3,340 ppm c) 4,480-6,240 ppm d) 2,890-3,360 ppm e) 4,730-6,100 ppm f) 2,930-3,350 ppm	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) Total femur-rib, Middle Woodland Gibson site b) Total femur-rib, Late Woodland Lodders site c) Female femur-rib, Middle Woodland Gibson site d) Female femur-rib, Late Woodland Lodders site e) Male femur-rib, Middle Woodland Gibson site f) Male femur-rib, Late Woodland Lodders site Range of means Skeletal remains LEAD; MAGNESIUM; MANGANESE; POTASSIUM; SODIUM; STRONTIUM; ZINC; ALUMINUM; CALCIUM; IRON; ILLINOIS; CADAVERS; BONES	Lambert, J.B. Vlasak, S.M. Thometz, A.C. Buikstra, J.E. 1982 American Journal of Physical Anthropology 59:289-294
7950 Hair						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 69-73).
7950 Kidney		ICP-AES	a) 62 b) 39	a) 61-159 mg/kg b) 88-156 mg/kg Wet wt	a) 123 mg/kg b) 120 mg/kg Wet wt Medians	a) Cortex b) Medulla Autopsies within 48 hr Normal adults, Great Lakes region, Ontario, Canada CADMIUM; ADULTS; AUTOPSIES; KIDNEYS; LIVER; MEASUREMENT METHODS; CADMIUM; CALCIUM; COPPER; IRON; MAGNESIUM; MANGANESE; PHOSPHORUS; POTASSIUM; SODIUM; ZINC	Subramanian, K.S. Meranger, J.C. 1982 Science of the Total Environment 24:167-187

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Magnesium
7439-95-4
Mg
AOW 24.305, MP 651 C, BP 1160 C, VP 1 mm Hg at 621 C, 10 mm Hg at 740 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7961 Liver		ICP-AES	84	100-220 mg/kg wet wt	163 mg/kg wet wt Median	Autopsies within 48 hr Normal adults, Great Lakes region, Ontario, Canada CANADA; ADULTS; AUTOPSIES; KIDNEYS; LIVER; MEASUREMENT METHODS; CADMIUM; CALCIUM; COPPER; IRON; MAGNESIUM; MANGANESE; PHOSPHORUS; POTASSIUM; SODIUM; ZINC	Subramanian, K.S. Meranger, J.C. 1983 Science of the Total Environment 28:147-157
7962 Milk		AAS	16	Not given	41.40 +or- 15.21 ug/ml	53.6% in low molecular wt fraction, 43.8% in proteins, 1.8% in fat, 0.8% in large particles such as casein micelles. Samples collected at 2nd nursing of day. Level per ml remained the same or decreased slightly with volume of milk expressed at a single nursing. Level not related to duration of lactation Healthy mothers in various stages of lactation ADULTS; MILK; CALCIUM; COPPER; MAGNESIUM; MINERALS; TRACE ELEMENTS; ZINC; LACTATION	Franzson, G.-B. Lonnerdal, B. 1982 Journal of Pediatrics 101(6):904-908
7963 Milk		AAS ES	7	a) Not given b) Not given c) Not given	a) 1.29 +or- 0.09 mmol b) 1.21 +or- 0.09 mmol c) 1.13 +or- 0.11 mmol S.E.	a) 6-8 days postpartum b) 13-15 days postpartum c) 26-28 days postpartum Mothers of premature infants. Infant birth wt <1.3 kg, mean gestational age 28 wk, Canada PREMATURE INFANTS; CANADA; NUTRITIONAL DEFICIENCIES; BLOOD PLASMA; MILK; COMPARATIVE EVALUATIONS; CALCIUM; MAGNESIUM; MINERALS; PHOSPHORUS; POTASSIUM; SODIUM; FOODS; LACTATION	Atkinson, S.A. Radde, I.C. Anderson, G.H. 1983 Journal of Pediatrics 102(1):99-106

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Magnesium
7439-95-4
Mg
AAW 24.305, MP 651 C, BP 1100 C, VP 1 mm Hg at 621 C, 10 mm Hg at 760 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7964 Sweat						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hopps, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).
7965 Urine	Ingestion	AAS	6	a) Not given b) Not given	a) 171 +or- 29 mg/day b) 170 +or- 30 mg/day	a) Intake 371 mg Mg and 49.67 mg Sn/day, 20 days b) Intake 371 mg Mg and 0.11 mg Sn/day, 20 days Combined urinary/fecal losses indicate apparent retention of -31 mg/day for a) and -19 mg/day for b Difference not significant. Healthy 21.0-28.0 yr olds, ht 160-192 cm, wt 49-82 kg WISCONSIN; ADULTS; BLOOD PLASMA; BLOOD SERUM; FECES; URINE; COMPARATIVE EVALUATIONS; COPPER; IRON; MAGNESIUM; MANGANESE; TIN; ZINC; DIETS; FOOD CONSUMPTION; METABOLISM; MINERAL METABOLISM	Johnson, N.A. Baier, M.J. Gregor, J.L. 1963 American Journal of Clinical Nutrition 35:1333-1338

Manganese
7439-96-5
Mn
AAW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7966 Adipose		AAS	81	0.02-0.11 ug/g dry wt 10th and 90th percentile	0.05 ug/g dry wt Median	Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, R.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
7967 Aorta		AAS	43	a) 0.20-0.49 ug/g (10th and 90th percentile) b) Not given c) Not given Dry wt	a) 0.32 ug/g (median) b) 0.67 +or- 0.26 ug/g c) 0.32 +or- 0.11 ug/g Dry wt	a) All ages, 43 cases b) Infants c) Adults Significant difference between b), c) ($p<0.001$). Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, R.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
7968 Blood		AAS	a) 101 b) 110 c) 13	a) Not given b) Not given c) Not given	a) 7.0 ug/l b) 9.6 ug/l c) 9.1 ug/l Geometric mean	a) 2-3 yr olds, living 0.5-8 km from lead smelter b) Adult male smelter workers c) Adult male painters in car factory Positive correlation with free erythrocyte porphyria ADULTS; CHILDREN; BLOOD; LEAD; MANGANESE; METALS; PORPHYRINS; AUTOMOTIVE; BIOACCUMULATION; INDUSTRIAL AREAS; INDUSTRIAL EMISSIONS; INDUSTRIAL PLANTS; INDUSTRIAL POLLUTION; OCCUPATIONAL HAZARDS; PAINTS; POPULATION EXPOSURE; SMELTERS	Wibowo, A.A.E. Salle, H.J.A. del Castilho, P. Zielhuis, R.L. 1979 International Archives of Occupational and Environmental Health 43:177-182

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Manganese
7439-96-5
Mn
AtW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7969 Bone		AAS	50	a) 0.19-0.77 ug/g (10th and 90th percentile) b) Not given c) Not given Dry wt	a) 0.36 ug/g (median) b) 1.51 +or- 1.37 ug/g c) 0.38 +or- 0.16 ug/g Dry wt	a) All ages, 50 cases b) Infants c) Adults Significant difference between b), c) (p<0.01). Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, R.E. Robinson, M.F. 1983 Biological Trace Element Research 4:105-115
7970 Bone		AAS	35	a) 92-330 ppm b) 156-610 ppm c) 119-324 ppm d) 198-363 ppm e) 59-366 ppm f) 110-621 ppm	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) Total femur-rib, Middle Woodland Gibson site b) Total femur-rib, Late Woodland Ledders site c) Female femur-rib, Middle Woodland Gibson site d) Female femur-rib, Late Woodland Ledders site e) Male femur-rib, Middle Woodland Gibson site f) Male femur-rib, Late Woodland Ledders site Range of means Skeletal remains LEAD; MAGNESIUM; MANGANESE; POTASSIUM; SODIUM; STRONTIUM; ZINC; ALUMINUM; CALCIUM; IRON; ILLINOIS; CADAVERS; BONES	Lambert, J.B. Vlasak, S.M. Thometz, A.C. Buikstra, J.E. 1983 American Journal of Physical Anthropology 59:289-294

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Manganese
7439-96-5
Mn
AEW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7971 Cartilage		AAS	67	a) 0.06-0.71 ug/g (10th and 90th percentile) b) Not given c) Not given d) Not given e) Not given Dry wt	a) 0.16 ug/g (median) b) 0.72 +or- 0.10 ug/g c) 0.23 +or- 0.27 ug/g d) 0.16 +or- 0.03 ug/g e) 0.38 +or- 0.16 ug/g Dry wt	a) All cases b) Infants c) Adults d) Adult men e) Adult women Significant difference between b), c) (p<0.001), d), e) (p<0.001). Levels decreased with age (Pearson correlation coefficient, r=-0.463, s=0.001). Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, H.H. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
7972 Hair						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).

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Manganese
7439-96-5
Mn
AtW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7973 Hair		AAS	45	a) 0.25-2.26 ug/g (10th and 90th percentile) b) Not given c) Not given Dry wt	a) 0.80 ug/g (median) b) 1.04 +or- 0.56 ug/g c) 0.45 +or- 0.14 ug/g Dry wt	a) All cases b) Adult men c) Adult women Significant difference between b), c) (p<0.001). Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 46 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; MERALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, H.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
7974 Hair		AA	a) 51 b) 52	a) 0.11-0.27 ug/g b) 0.12-0.25 ug/g 25th-75th percentiles	a) 0.18 ug/g b) 0.17 ug/g Medians	a) Drank hard tapwater (mean hardness 330 ppm) at least 1 yr b) Drank soft tapwater (mean hardness 33 ppm) No significant difference Healthy Caucasian preschool children matched by age (4.5-5.5 yr old), sex, and socioeconomic status, Guelph, Ontario (hard water area) and Halifax, Nova Scotia (soft water area), Canada CANADA; AGE; CHILDREN; SEX; NUTRITIONAL DEFICIENCIES; HAIR; CALCIUM; COPPER; MANGANESE; ZINC; DRINKING WATER	Gibson, R.S. Anderson, H.H. Scythes, C.A. 1983 American Journal of Clinical Nutrition 37:37-42

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Manganese
7439-96-5
Mn
AtW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1518 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7975 Heart		AAS	46	a)0.46-1.03 ug/g (10th and 90th percentile) b) Not given c) Not given Dry wt	a) 0.68 ug/g (median) b) 1.20 +or- 1.08 ug/g c) 0.70 +or- 0.18 ug/g Dry wt	a) All cases b) Infants c) Adults Significant difference between b), c) (p<0.01). Autopsies within 24 hr 0 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, B.E. Robinson, M.F. 198? Biological Trace Element Research 4:105-115
7976 Kidney		ICP-AES	a) 42 b) 39	a) 0.3-1.1 mg/kg b) 0.2-1.3 mg/kg Wet wt	a) 0.6 mg/kg b) 0.5 mg/kg Wet wt Medians	a) Cortex b) Medulla Autopsies within 48 hr Normal adults, Great Lakes region, Ontario, Canada CANADA; ADULTS; AUTOPSIES; KIDNEYS; LIVER; MEASUREMENT METHODS; CADMIUM; CALCIUM; COPPER; IRON; MAGNESIUM; MANGANESE; PHOSPHORUS; POTASSIUM; SODIUM; ZINC	Subramanian, K.S. Meranger, J.C. 1982 Science of the Total Environment 24:147-157
7977 Kidney		AAS	55	a) 2.08-5.31 ug/g b) 0.63-2.62 ug/g 10th and 90th percentiles Dry wt	a) 3.54 ug/g b) 1.49 ug/g Medians Dry wt	a) Cortex, 46 samples b) Medulla, 45 samples Autopsies within 24 hr 0 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, B.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115

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Manganese
7439-96-5
Mn
AtW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7978 Liver		ICP-AES	46	0.6-3.2 mg/kg wet wt	1.3 mg/kg wet wt Median	Autopsies within 48 hr Normal adults, Great Lakes region, Ontario, Canada CANADA; ADULTS; AUTOPSIES; KIDNEYS; LIVER; MEASUREMENT METHODS; CADMIUM; CALCIUM; COPPER; IRON; MAGNESIUM; MANGANESE; PHOSPHORUS; POTASSIUM; SODIUM; ZINC	Subramanian, K.S. Meranger, J.C. 1983 Science of the Total Environment 28:167-157
7979 Liver		AAS	53	2.73-5.92 ug/g dry wt 10th and 90th percentile	3.89 ug/g dry wt Median	Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-2 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, E.E. Robinson, E.F. 1983 Biological Trace Element Research 4:103-115
7980 Lung		AAS	52	a) 0.43-0.88 ug/g (10th and 90th percentile) b) Not given c) Not given Dry wt	a) 0.58 ug/g (median) b) 0.72 +or- 0.15 ug/g c) 0.56 +or- 0.16 ug/g Dry wt	a) All cases b) Adult men c) Adult women Significant difference between b), c) ($p<0.01$). Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-2 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, E.E. Robinson, E.F. 1983 Biological Trace Element Research 4:103-115

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Manganese
7439-96-5
Mn
AEW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7981 Muscle		AAS	48	0.31-0.77 ug/g dry wt 10th and 90th percentile	0.45 ug/g dry wt Median	Skeletal muscle. Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, D.E. Robinson, N.P. 1982 Biological Trace Element Research 4:105-115
7982 Pancreas		AAS	43	1.42-3.86 ug/g dry wt 10th and 90th percentile	2.43 ug/g dry wt Median	Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, D.E. Robinson, N.P. 1982 Biological Trace Element Research 4:105-115
7983 Spleen		AAS	48	0.37-0.79 ug/g dry wt 10th and 90th percentile	0.53 ug/g dry wt Median	Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, D.E. Robinson, N.P. 1982 Biological Trace Element Research 4:105-115

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Manganese
7439-96-5
Mn
AtW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7984 Sweat						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hopps, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 58-73).
7985 Urine	Ingestion	AAS	8	a) Not given b) Not given	a) <0.02 mg/day b) <0.02 mg/day	a) Intake 3.20 mg Mn and 49.67 mg Sn/day, 20 days b) Intake 3.20 mg Mn and 0.11 Sn/day, 20 days Combined urinary/fecal losses indicate an apparent retention of -0.16 mg/day for a) and -0.10 mg/day for b). Difference not significant Healthy 21.0-28.0 yr olds, ht 168-192 cm, wt 69-82 kg WISCONSIN; ADULTS; BLOOD PLASMA; BLOOD STRUM; FECES; URINE; COMPARATIVE EVALUATIONS; COPPER; IRON; MAGNESIUM; MANGANESE; TIN; ZINC; DIETS; FOOD CONTAMINATION; METABOLISM; MINERAL METABOLISM	Johnson, M.A. Baier, M.J. Greger, J.L. 1982 American Journal of Clinical Nutrition 35:1332-1338

Mercury
7439-97-6
Hg
AtW 200.59, MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7986 Blood		AAS	11	1.0-0.5 ng/ml	5.2 +or- 1.0 ng/ml S.E.	No recent exposure Healthy 22-41 yr olds ADULTS; BLOOD; URINE; MEASUREMENT METHODS; MERCURY; METALS	Bourcier, D.R. Sharma, R.P. Brown, D.D. 1982 American Industrial Hygiene Association Journal 43:329-332

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Mercury
7439-97-6
Hg
AEW 200.59, MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7997 Blood		AAS	a) 47 b) 43	a) 0.05-0.59 ug/100 ml b) 0.53-13.5 ug/100 ml	a) 0.23 ug/100 ml b) 2.92 ug/100 ml	a) Controls, never worked in Hg units b) Exposed to Hg 0.5-16 yr (mean 5.3 yr) Data also for Pb and Cd Workers and controls in 2 factories using elemental Hg. Subjects matched with respect to age, socioeconomic status and job, 28.9-59.2 yr old, wt 50-99 kg, ht 163-190 cm, Belgium Increased prevalence of abnormal psychomotor scores occurred between 1 and 2 ug Hg/100 ml blood and between 50 and 100 ug Hg/g creatinine in urine BELGIUM; ADULTS; NEUROLOGIC MANIFESTATIONS; BLOOD; URINE; CADMIUM; IRON; MERCURY; METALS; HEALTH HAZARDS; INDUSTRIAL PLANTS; OCCUPATIONAL HAZARDS; SMOKING	Roels, H. Lauwerys, R. Buchet, J.-P. Bernard, A. Berthels, A. Oversteyns, M. Gaussin, J. 1982 International Archives of Occupational and Environmental Health 50:77-93
7998 Blood	Ingestion	AAS	95	a) 0.3-9.8 ug/dl b) Not given	a) Not given b) 0.86 ug/dl	a) Inuit miners b) Caucasian miners 18-59 yr olds, Canada CANADA; ADULTS; CHILDREN; BLOOD; CADMIUM; LEAD; MERCURY; ZINC; INDUSTRIAL ATMOSPHERES; MINING; OCCUPATIONAL HAZARDS; SMELTERS	Parent, J.P. Wigfield, D.C. 1982 International Archives of Occupational and Environmental Health 51:15-24
7999 Blood	Ingestion	AAS	3	0.18-0.24 ppm	Not given	Persons with hair levels 18.1-64.0 ppm Fishermen, mean fish intake 88-188 kg/person/yr, Republic of Seychelles. SEYCHELLES; ADULTS; NEWBORN; BLOOD; HAIR; MERCURY; METALS; BIOACCUMULATION; DIETS; FISHES; POPULATION EXPOSURE	Matthews, A.D. 1983 Environmental Research 30:309-312

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Mercury
7439-97-6
Hg
AtW 200.59, MP -38.87 C, BP 356.72 C, VP 2E10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7990 Blood	Ingestion	AAS	174	a) 0.04-2.58 ug/100 ml b) 0.04-2.58 ug/100 ml c) 0.04-1.21 ug/100 ml d) 0.04-0.70 ug/100 ml	a) 0.45 +or- 0.03 ug/100 ml (SE) b) 0.58 +or- 0.04 ug/100 ml (SE) c) 0.35 +or- 0.03 ug/100 ml (SE) d) 0.28 +or- 0.16 ug/100 ml (SD)	a) All cases, fish consumption 10-325 g/day b) Area of Hg discharge, mean level in fish 0.27 ug/kg, total weekly intake 0-483 ug/70 kg body wt, 119 cases c) Control area, negligible Hg discharge, mean level in fish 0.22 ug/kg, total weekly intake 0-560 ug/70 kg body wt, 55 cases d) Low fish consumers, <100 g fish/wk, 21 cases Residents of fishing communities on NE Irish Sea (contaminated area) and SW English Channel (control area), United Kingdom UNITED KINGDOM; BLOOD; HAIR; MERCURY; MERCURY ORGANIC COMPOUNDS; DIETS; FISHES; FOOD CONTAMINATION; POPULATION EXPOSURE; WATER POLLUTION	Bouton, J. Lindsay, D.G. Bishop, J.E. Salmon, L. Dixon, E.J. Evans, W.H. Reid, J.R. Hewitt, C.J. Jeffries, D.F. 1979 Environmental Research 19:351-368
7991 Hair	Ingestion	AAS	210	a) 0.4-9.5 ug/g b) 0.1-11.7 ug/g c) 0.01-2.5 ug/g	a) 2.5 +or- 1.6 ug/g b) 1.9 +or- 2.1 ug/g c) 0.8 +or- 0.5 ug/g	a) Inorganic Hg. 116 residents Lake Murray, 3-3 fish meals/day. Total Hg 0.2-50.0 ug/g (mean 10.0 +or- 7.0 ug/g). Hg in water attributed to geological factors b) Inorganic Hg. 51 residents Suki, 2-3 fish meals/day. Total Hg 1.0-39.0 ug/g (mean 8.3 +or- 5.0 ug/g) c) Inorganic Hg. 45 residents Sungines, 1-7 fish meals/day. Total Hg 0.7-10.5 ug/g (mean 3.2 +or- 2.0 ug/g) 1-70 yr olds, Papua New Guinea NEW GUINEA; ADULTS; CHILDREN; HAIR; MERCURY; MERCURY INORGANIC COMPOUNDS; MERCURY ORGANIC COMPOUNDS; METALS; METYL RADICALS; DIETS; FISHES; FOOD CONTAMINATION; POPULATION EXPOSURE; WATER POLLUTION	Kyle, J.H. Ghani, Z. 1982 Archives of Environmental Health 37(5):366-370

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7993 Hair		AAS	a) 23 b) 67	a) 0.01-0.04 ppm b) 0.01-2.02 ppm	a) 0.03 +or- 0.03 ppm b) 0.21 +or- 0.40 ppm	a) Urban b) Rural No significant difference Urban and rural children, 1-4 yr old (mean 2.6 yr) and 6-16 yr old (mean 11.3 yr), respectively, 905 with mild learning problems, from middle to low socioeconomic levels, TN TENNESSEE; ADOLESCENTS; CHILDREN; HAIR; ARSENIC; CADMIUM; LEAD; MERCURY; METALS; NICKEL; AGRICULTURE; BIOACCUMULATION; INDUSTRIAL AREAS; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Folio, H.R. Hannigan, C. Errera, J. 1982 Environmental Pollution (Series A) 29:261-269
7993 Hair	Ingestion	AAS	36	a) 0.77-34 mg/kg b) 0.57-21 mg/kg c) 0.57-34 mg/kg d) Not given e) Not given f) Not given g) Not given	a) 7.6 mg/kg b) 5.4 mg/kg c) 6.6 mg/kg d) 1.9 mg/kg e) 4.9 mg/kg f) 5.3 mg/kg g) 3.8 mg/kg	a) Men (21) b) Women (15) c) Total a)+b) d) 0-10 yr olds, 1.7 fish meals/wk e) 10-30 yr olds, 1.8 fish meals/wk f) 30-50 yr olds, 2.3 fish meals/wk g) 50-70 yr olds, 2.3 fish meals/wk Fish from Hg-contaminated lake. Burbot contained 1.3 mg Hg/kg and pike 1.9 mg/kg. Residents living near Lake Kalajarvi, Finland. FINLAND; METAL POISONING; HAIR; MERCURY; METALS; BIOACCUMULATION; DIETS; FISHES; WATER POLLUTION	Lodenius, M. Seppanen, A. 1982 Chemosphere 11(8):755-759
7994 Hair		X-ray spectron	a) 1 b) 1 c) 1 d) 1	a) 0-580 ug/g b) 25-1200 ug/g c) 7-33 ug/g d) 170-60 ug/g	a) 554 +or- 3.6 ug/g b) Not given c) Not given d) Not given	a) 0-220 mm from cut end, Iraqi peasant woman who ate wheat contaminated with methylmercury. Mean peak for 4 measurements in 6 mo b) 0-140 mm from cut end, another Iraqi woman c) 0-220 mm from cut end, individual from area of high fish consumption d) 0-120 mm from cut end, Canadian fishing guide with periodic high fish diet, no clear symptoms of poisoning Estimated from graph CANADA; IRAQ; ADULTS; HAIR; MEASUREMENT METHODS; CALCIUM; COPPER; IRON; LEAD; MERCURY; ZINC; BIOACCUMULATION; DIETS; FISHES; FOOD CONTAMINATION	Toribara, T.Y. Jackson, B.A. French, W.R. Thompson, A.C. Jablovic, J.H. 1982 Analytical Chemistry 54:1844-1849

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Mercury
7439-97-6
Hg
ATW 200.59, MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7995 Hair						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SUGAR; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).
7996 Hair	Ingestion	AAS	a) 40 b) 36 c) 36	a) 5.5-60.2 ppm b) 6.66-32.53 ppm c) 4.32-62.0 ppm	a) 26.29 +or- 14.51 ppm b) 12.0 +or- 6.6 ppm c) 15.25 +or- 11.5 ppm	a) Fishermen b) Mothers c) Neonates Mean fish intake 80-100 kg/person/yr, Republic of Seychelles SEYCHELLES; ADULTS; NEONATE; BLOOD; HAIR; MERCURY; METALS; BIOACCUMULATION; DIETS; FISHES; POPULATION EXPOSURE	Matthews, A.D. 1983 Environmental Research 30:306-312

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Mercury
7439-97-6
Hg
AAW 200.59, MP -38.87 C, BP 356.72 C, VP 2E10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7087 Hair	Ingestion	AAS	a) 16 b) 128	a) 10-37 ug/g b) 0.1-2.5 ug/g	a) Not given b) 0.78 ug/g	a) 10.1 kg fish/wk/family of 6.2 persons, fishing villages. Estimated from graph b) 1.9 kg fish/wk/family of 6.4 persons, agricultural village Measured as organic Hg. Levels in hair and blood correlated (r=0.88) 1.4-62 yr old residents of fishing villages, Cancas and Mancora. 7-80 yr old residents of agricultural village, Morropon, Northern Peru. In fishing village, distal limb paresthesias, impaired vision, backache, dizziness, headache, impaired hearing, joint pains, abdominal pain, leg cramps, nerve root pain, weak limbs. In agricultural village, distal limb paresthesias, headache, abdominal pain, nervousness, dizziness, backache, leg cramps, arm pain, perioral or glossal paresthesias, earache, weak limbs. PERU; ADULTS; CHILDREN; BLOOD; HAIR; MERCURY; MERCURY ORGANIC COMPOUNDS; METALS; BIOACCUMULATION; DIETS; FISHES; FOOD CONTAMINATION; POPULATION EXPOSURE	Turner, M.D. Marsh, D.O. Smith, J.C. Inglis, J.B. Clarkson, T.W. Rubio, C.E. Chiriboga, J. Chiriboga, C.C. 1982 Archives of Environmental Health 35(6):367-370
7090 Hair		NA	172	a) 0.1-11.3 mg/kg b) 0.1-11.3 mg/kg c) 0.4-5.0 mg/kg	a) 1.80 +or- 0.13 mg/kg b) 2.00 +or- 0.17 mg/kg c) 1.35 +or- 0.14 mg/kg S.E.	a) All cases, fish consumption 10-225 g/day b) Area of Hg discharge, mean level in fish 0.27 mg/kg, total weekly intake 6-443 ug/70 kg body wt, 110 cases c) Control area, negligible Hg discharge, mean level in fish 0.22 mg/kg, total weekly intake 4-360 ug/70 kg body wt, 55 cases Statistical difference b),c) (p<0.05) Residents of fishing communities on NW Irish Sea (contaminated area) and SW English Channel (control area), United Kingdom UNITED KINGDOM; BLOOD; HAIR; MERCURY; MERCURY ORGANIC COMPOUNDS; DIETS; FISHES; FOOD CONTAMINATION; POPULATION EXPOSURE; WATER POLLUTION	Norton, J. Lindsay, D.G. Bislop, J.E. Salmon, L. Dixon, H.J. Evans, W.H. Reid, J.R. Hewitt, C.J. Jeffries, D.F. 1978 Environmental Research 16:351-368

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Mercury
7439-97-6
Hg
AEW 200.59, MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
7999 Milk	Ingestion	NA	21	<or= 0.5-17.5 ng/g	Not given	Weekly samples, different foods on some day. 2-3 months beginning 15 days after childbirth. Mean calculated from samples with levels above detection limit Healthy subjects, Italy ITALY; ADULTS; MILK; IN VITRO ANALYSIS; LACTATION; ANTIMONY; CESIUM; CHROMIUM; COBALT; IRON; MERCURY; RUBIDIUM; SCANDIUM; TRACE ELEMENTS; ZINC	Clemente, G.F. Ingrao, G. Scatarzi, G.P. 1982 Science of the Total Environment 24:255-265
0000 Milk		AAS	20	0.0009-0..15 ppm	0.0095 +or- 0.0055 ppm	Samples in April-July 1981 Lactating mothers, Madrid, Spain SPAIN; MILK; COMPARATIVE EVALUATIONS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; MERCURY; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; LACTATION; PESTICIDE RESIDUES	Baluja, G. Hernandez, L.M. Gonzalez, M.J. Rico, M.C. 1982 Bulletin of Environmental Contamination and Toxicology 28:573-577
0001 Urine		AAS	11	1.7-22.5 ng/ml	6.9 +or- 3.1 ng/ml S.E.	No recent exposure Healthy 22-41 yr olds ADULTS; BLOOD; URINE; MEASUREMENT METHODS; MERCURY; METALS	Bourcier, D.R. Shanna, R.P. Brown, D.R. 1982 American Industrial Hygiene Association Journal 43:328-332

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0002 Urine		AAS	a) 47 b) 43	a) 0.6-4.7 ug/g creatinine b) 9.9-286.0 ug/g creatinine	a) 1.3 ug/g creatinine b) 93.5 ug/g creatinine	a) Controls, never worked in Hg units b) Exposed to Hg 0.5-16 yr (mean 5.3 yr) Data also for Pb and Cd Workers and controls in 2 factories using elemental Hg. Subjects matched with respect to age, socioeconomic status and job, 20.9-59.2 yr old, wt 50-99 kg, ht 163-190 cm, Belgium Increased prevalence of abnormal psychometer scores occurred between 1 and 2 ug Hg/100 ml blood and between 50 and 100 ug Hg/g creatinine in urine BELGIUM; ADULTS; NEUROLOGIC MANIFESTATIONS; BLOOD; URINE; CADMIUM; IRON; MERCURY; METALS; HEALTH HAZARDS; INDUSTRIAL PLANTS; OCCUPATIONAL HAZARDS; SMOKING	Roels, H. Lauwerys, R. Buchet, J.-P. Bernard, A. Berthels, A. Overstoyns, H. Geussin, J. 1982 International Archives of Occupational and Environmental Health 50:77-93
0003 Urine		AAS	18	0.02-0.70 mg/l	0.29 mg/l	Monthly spot samples for 3 yr or duration of employment Data also for number of months urine Hg levels were >0.25 mg/l and >0.50 mg/l 19-56 yr old (mean 31 yr) factory workers exposed to elemental Hg vapor Subjects asymptomatic but 5 had abnormal nerve conduction. In all, mean compound muscle action potential amplitude was low and motor distal latency long. ADULTS; METAL POISONING; NEUROLOGIC MANIFESTATIONS; URINE; MERCURY; METALS; BIOACCUMULATION; INDUSTRIAL PLANTS; INDUSTRIES; OCCUPATIONAL HAZARDS	Levine, S.P. Cavender, G.D. Langolf, G.D. Albers, J.W. 1982 British Journal of Industrial Medicine 39:136-139
0004 Urine		AAS	20	0.063-0.345 mg/24 hr	0.179 mg/24 hr	Workers required to wear respirators who were exposed to Hg. Data analyzed to determine if Hg in spot urine samples could predict total 24 hr excretion. ADULTS; INDUSTRIAL MEDICINE; MERCURY; METALS; OCCUPATIONAL HAZARDS	Wallin, G. Barber, T. 1982 Journal of Occupational Medicine 24(8):590-595

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Mercury
7439-97-6
Hg
AtW 200.59, MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8085 Urine	Inhalation		38	a) Not applicable b) Not given c) 285-650 ug/l	a) 580 ug/l b) >30 ug/l c) Not given	a) 13 yr old Mexican-American girl, after 2.5 mo exposure during play. Level in home 1.00 mg/cu m/24 hr b) 29 of 36 exposed children (6 wk-10 mo old) c) 3 adults in household of patient a) Los Angeles County, CA Patient a): Tenderness of soles and palms, fever, pruritic rash on arms and legs, followed by scarlatiniform vasculitic eruption of trunk, edema of extremities and face, conjunctivitis, red throat, red and cracked lips. Rash progressed to generalized desquamation, including palms, face, soles. Cervical and axillary adenopathy developed. Symptoms disappeared after penicillamine therapy CALIFORNIA; ADULTS; CHILDREN; MUTAL POISONING; URINE; MERCURY; METALS; INHALATION	Adler, R. Bonstein, B. Schaff, P. Kelly, B. 1982 Journal of Pediatrics 101(6):967-969

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Mercury
7439-97-6
Hg
AtW 200.59, MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8066 Urine	Inhalation Dermal	Chem	12	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given	a) <10 ug/l b) <10 ug/l c) 50 ug/l d) 50 ug/l e) 60 ug/l f) 60 ug/l g) 95 ug/l h) 100 ug/l i) 100 ug/l j) 140 ug/l k) 245 ug/l l) 670 ug/l	a) Total contact, 480 hr b) Total contact time unknown, actively exposed at sampling c) Total contact, 633 hr d) Total contact, 1,582.5 hr e) Total contact time unknown f) Total contact, 480 hr g) Total contact, 160 hr actively exposed at sampling h) Total contact, 949.5 hr i) Total contact, 1680 hr, actively exposed at time of sampling j) Total contact time unknown, actively exposed at time of sampling k) Total contact, 2251 hr, actively exposed at time of sampling l) Total contact, 2533 hr, actively exposed at time of sampling Contact: direct handling Workers in fungicide manufacture factory and gold refining Neuro-motor effects ADULTS; CASE HISTORIES; BEHAVIOR DISORDERS; NEUROLOGIC MANIFESTATIONS; OCCUPATIONAL DISEASES; URINE; COMPARATIVE EVALUATIONS; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; MERCURY	Williamson, A.M. Yoo, H.K.C. Henderson, J. 1982 International Archives of Occupational and Environmental Health 50:273-286

Mercury(1+), methyl-, ion (8 CI)
Mercury(1+), methyl- (9 CI)
22967-92-6
C-H3-Hg
MW 215.63

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8007 Blood	Ingestion	CC AAS	a) 102 b) 32	a) 11-275 ng/ml b) 3.3-25.1 ng/ml	a) 82 ng/ml b) 9.9 ng/ml	a) 10.1 kg fish/wk/family of 6.2 persons, fishing villages b) 1.9 kg fish/wk/family of 6.4 persons, agricultural villages No correlation between paresthesias and methyl Hg levels. 1.4-82 yr old residents of fishing villages, cancas and Mancora. 7-80 yr old residents of agricultural village, Marropon, Northern Peru. In fishing village, distal limb paresthesias, impaired vision, backache, dizziness, headache, impaired hearing, joint pains, abdominal pain, leg cramps, nerve root pain, weak limbs. In agricultural village, distal limb paresthesias, headache, abdominal pain, nervousness, dizziness, backache, leg cramps, arm pain, perioral or glossal paresthesias, earache, weak limbs. PERU; ADULTS; CHILDREN; BLOOD; HAIR; MERCURY; MERCURY ORGANIC COMPOUNDS; MENTALS; BIOACCUMULATION; DIETS; FISHES; FOOD CONTAMINATION; POPULATION EXPOSURE	Turner, M.D. Marsh, D.O. Smith, J.C. Inglis, J.B. Clarkson, T.W. Rubio, C.E. Chiriboga, J. Chiriboga, C.C. 1982 Archives of Environmental Health 35(6):367-370
8008 Blood	Ingestion	AAS	173	a) <0.03-2.35 ug/100 ml b) <0.03-2.35 ug/100 ml c) 0.03-1.00 ug/100 ml	a) 0.41 +or- 0.03 ug/100 ml b) 0.65 +or- 0.04 ug/100 ml c) 0.32 +or- 0.03 ug/100 ml S.E.	a) All cases, fish consumption 10-228 g/day b) Area of Hg discharge, mean level in fish 0.27 ug/kg, total weekly intake 4-443 ug/70 kg body wt, 110 cases c) Control area, negligible Hg discharge, mean level in fish 0.22 ug/kg, total weekly intake 4-360 ug/70 kg body wt, 33 cases Residents of fishing communities on NE Irish Sea (contaminated area) and SW English Channel (control area), United Kingdom UNITED KINGDOM; BLOOD; HAIR; MERCURY; MERCURY ORGANIC COMPOUNDS; DIETS; FISHES; FOOD CONTAMINATION; POPULATION EXPOSURE; MARINE POLLUTION	Harton, J. Lindsay, D.G. Hislop, J.S. Solmon, L. Dixon, R.J. Evans, W.H. Reid, J.R. Smith, C.J. Jeffries, D.F. 1979 Environmental Research 18:381-388

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Mercury(1+), methyl-, ion (8 CI)
Mercury(1+), methyl- (9 CI)
22967-92-6
C-H3-Hg
MW 215.63

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8069 Blood		AAS	98	a) 1.4-24.8 ug/l b) 1.1-42.3 ug/l	a) 9.2 +or- 5.4 ug/l b) 8.1 +or- 7.0 ug/l	a) Liverpool Bay area, total intake 6.8-1145 (mean 138) ug/wk, 58 subjects b) Thames Estuary area, total intake 3.3-260 (mean 62) ug/wk, 40 subjects No significant differences. Blood and hair levels correlated (0.837). Also total intake (0.54). Measured as total Hg. Subjects eating fish at least 2X/wk and living near coastal areas receiving Hg discharges, United Kingdom, 1970-79 UNITED KINGDOM; ADULTS; BLOOD; HAIR; MERCURY; BIOACCUMULATION; DIETS; FISHES; FOOD CONTAMINATION; INDUSTRIAL POLLUTION; POPULATION EXPOSURE; WATER POLLUTION	Sherlock, J.C. Lindsay, D.G. Bislop, J.E. Evans, W.H. Collier, T.N. 1982 Archives of Environmental Health 37(5):271-278
8010 Hair	Ingestion	AAS	a) 114 b) 51 c) 45	a) 3.2-50.5 ug/g b) 0.6-25.7 ug/g c) 0.3-9.0 ug/g	a) 15.5 +or- 6.9 ug/g b) 6.4 +or- 4.6 ug/g c) 2.4 +or- 1.8 ug/g	a) Residents Lake Murray, 2-3 fish meals/day. Hg in water attributed to geological factors b) Residents Suki, 2-3 fish meals/day c) Residents Rumginae, 1-7 fish meals/wk Significant difference between a) and b), a) and c) (P<0.001) No significant variation with sex or age 1-70 yr olds, Papua New Guinea NEW GUINEA; ADULTS; CHILDREN; HAIR; MERCURY; MERCURY INORGANIC COMPOUNDS; MERCURY ORGANIC COMPOUNDS; METALS; METHYL RADICALS; DIETS; FISHES; FOOD CONTAMINATION; POPULATION EXPOSURE; WATER POLLUTION	Kyle, J.H. Ghani, M. 1982 Archives of Environmental Health 37(5):266-270

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Mercury(1+), methyl-, ion (8 CI)
Mercury(1+), methyl- (9 CI)
22967-92-6
C-H3-Hg
MW 215.63

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8011 Hair		AAS	942	a) 0.2-27.6 mg/kg b) 0.2-21 mg/kg	a) 1.6 +or- 2.4 mg/kg b) 3.9 +or- 2.7 mg/kg	a) 942 subjects eating fish at least 1X/wk, 284 with levels >2 mg/kg, 526 <1 mg/kg b) 98 subjects, selected from a) to produce normal distribution over observed range, 49% had 2.0-3.9 mg/kg, 5% had <1 mg/kg Measured as total Hg 20-59 yr olds from two coastal areas receiving Hg discharges, United Kingdom, 1970-79 UNITED KINGDOM; ADULTS; BLOOD; HAIR; MERCURY; BIOACCUMULATION; BIRDS; FISHES; FOOD CONTAMINATION; INDUSTRIAL POLLUTION; POPULATION EXPOSURE; WATER POLLUTION	Sherlock, J.C. Lindsay, D.G. Bislop, J.E. Evans, W.H. Collier, T.R. 1982 Archives of Environmental Health 37(5):271-278

Methanol
67-56-1
C-H4-O
MW 32.04, MP -97.8 C, BP 64.7 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8012 Blood			1	Not given	220 mg/dl	After methanol poisoning. Serum lactate, 7.2 mmol/l. Anion gap ($Na^+ + K^+$) - ($Cl^- + COOH^-$), 43 mmol/l. 32 yr old Vomiting, epigastric pain, blurred vision for 24 hr prior to hospital admission. At admission, coma completely areflexic with bilateral mydriasis and acidotic respiration, temperature 35.7 C, systolic blood pressure 60 mm Hg. Death 72 hr later. ACCIDENTAL POISONING; BELGIUM; ADULTS; CASE HISTORIES; BLOOD; BLOOD SERUM; FORENSIC MEDICINE; ALCOHOLS	Cytryn, E. Peteral, P. 1983 Lancet 1(8346):56

Nickel
7440-02-0
Ni
AEW 58.71, MP 1455 C, BP 2837 C, VP 10 mm Hg at 2090 C, 100 mm Hg at 2370 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8013 Blood, plasma	Ingestion	AAS	5	a) 22-46 ug/l b) 85-145 ug/l	a) Not given b) Not given	a) Baseline levels following fasting b) Individual peaks at 2-3 hr following 5 mg Ni (as 22.4 mg NiSO4.H2O). Mean increases above baseline were 68.8, 73.8, 80.8 and 53.3 ug/l at 1, 2, 3 and 4 hr after dose, respectively Rise in Ni suppressed when dose given with: standard Guatemalan meal, typical North American breakfast, whole cow's milk, coffee, tea, orange juice, 1g ascorbic acid, chelate (iron, ethylenediaminetetraacetate), or disodium EDTA. Rise in Ni not effected by Coca Cola or phytic acid. Healthy adults, Guatemala GUATEMALA; ADULTS; DIETS; NICKEL; METALS; BLOOD PLASMA	Solomons, N.W. Viteri, F. Shuler, T.R. Nicleson, F.H. 1982 Journal of Nutrition 112:39-50
8014 Hair		AAS	a) 23 b. 67	a) 0.01-1.26 ppm b) 0.01-46.70 ppm	a) 0.25 +or- 0.28 ppm b) 1.39 +or- 5.90 ppm	a) Urban b) Rural No significant difference Urban and rural children, 1-4 yr old (mean 2.6 yr) and 4-16 yr old (mean 11.3 yr), respectively, 90% with mild learning problems, from middle to low socioeconomic levels, TN TENNESSEE; ADOLESCENTS; CHILDREN; HAIR; ARSENIC; CADMIUM; LEAD; MERCURY; METALS; NICKEL; AGRICULTURE; BIOACCUMULATION; INDUSTRIAL AREAS; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Folio, M.R. Hennigan, C. Errera, J. 1982 Environmental Pollution (Series A) 29:261-269
8015 Hair						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, P. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).

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Nickel
7440-02-0
Ni
AtW 58.71, MP 1455 C, BP 2837 C, VP 10 mm Hg at 2690 C, 100 mm Hg at 2370 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8016 Milk		ES	a) 16 b) 31 c) 23 d) 22 e) 31 f) 26 g) 32	a) 0.03-0.23 ug/g b) 0.05-0.34 ug/g c) 0.05-0.62 ug/g d) 0.00-0.19 ug/g e) 0.04-0.20 ug/g f) 0.05-0.20 ug/g g) 0.04-0.20 ug/g	a) 0.11 ug/g b) 0.16 ug/g c) 0.14 ug/g d) 0.12 ug/g e) 0.13 ug/g f) 0.11 ug/g g) 0.10 ug/g	a) Urban areas, poor living conditions, country A b) Urban areas, high standard of living, country A c) Rural areas, country A d) Urban areas, poor living conditions, country B e) Urban areas, high standard of living, country B f) Rural areas, country B g) Urban areas, poor living conditions, country C Lactating mothers of 3-9 mo old infants. 3 unspecified countries in widely varying areas of world. ADULTS; MILK; MEASUREMENT METHODS; LEAD; METALS; NICKEL; LACTATION; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Rica, C.C. Kirkbright, G.F. 1982 Science of the Total Environment 22:193-201

Nickel carbonyl [Ni(CO)4] (8 CI)
Nickel carbonyl [Ni(CO)4], (T-4)- (9 CI)
13463-39-3
C4-Ni-O4
MW 170.8, MP -25 C, BP 43 C, VP 400 mm Hg at 25.8 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8017 Hair	Inhalation	AAS	a) 1 b) 1 c) 1 d) 1 e) 1	a) 48.1-8.8 ug/g b) 39.9-2.8 ug/g c) 28-0.9 ug/g d) 2.3-17.5 ug/g e) 4.0-0.4 ug/g	a) Not given b) Not given c) Not given d) Not given e) Not given	a) Days 0 and 144. Below detection limits, days 79, 82, 156, 169 b) Days 0 and 123. Below detection limits, days 160, 169 c) Days 0 and 169. Below detection limits, days 133 and 145 d) Days 126 and 169. Level day 0, 7.0 ug/g. Chelation therapy before first sample e) Days 0 and 142. Below detection limits, days 161, 169 Days after exposure. Hair sampled close to scalp, analysed by bundles. ADULTS; METAL POISONING; HAIR; URINE; DRUG THERAPY; NICKEL; INDUSTRIAL ACCIDENTS; INHALATION	Hogedorn-Oets, H. Kuppers, G. Stoeppler, M. 1977 Archives of Toxicology 38:275-288

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Nickel carbonyl [Ni(CO)4] (8 CI)
Nickel carbonyl [Ni(CO)4], (T-4)- (9 CI)
13463-39-3
C4-Ni-O4
MW 170.8, MP -25 C, BP 43 C, VP 400 mm Hg at 25.8 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8018 Urine	Inhalation	AAS	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1 g) 1	a) 124-31 ug/ml b) 170-87 ug/ml c) 195-75 ug/ml d) 1570-57 ug/ml e) 392-32 ug/ml f) 293-133 ug/ml g) 97-33 ug/ml	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 20.5 and 36 hr. 105 ug/ml at <16 hr b) 36 and 16 hr c) <16 and 20.5 hr. 97 ug/ml at 36 hr d) 16 and 132 hr. 1106 ug/ml at 1 hr e) 20.5 and 60 hr. 146 ug/ml at 1 hr. 118 ug/ml at 132 hr f) <16 and 20.5 hr. 185 ug/ml at 36 hr g) <16 and 20.5 hr. 57 ug/ml at 36 hr Times after exposure. Chelation therapy before first sample in d) and e)). ADULTS; METAL POISONING; HAIR; URINE; DRUG THERAPY; NICKEL; INDUSTRIAL ACCIDENTS; INHALATION	Hagedorn-Gotz, H. Kuppers, G. Stoeppler, M. 1977 Archives of Toxicology 38:275-285

Nitrate
14797-55-8
N-O3
MW 62.01

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8019 Milk				Not given	0.023 +or- 0.003 mM	1 hr after normal evening meal. Similar level in blood plasma Lactating volunteers MILK; SALIVA; NITRATES; LACTATION	Green, L.C. Tannenbaum, S.R. Fox, J.G. 1982 New England Journal of Medicine 306(22):1367-1368
8020 Saliva				0.2-0.5 mM	Not given	1 hr after normal evening meal Lactating volunteers MILK; SALIVA; NITRATES; LACTATION	Green, L.C. Tannenbaum, S.R. Fox, J.G. 1982 New England Journal of Medicine 306(22):1367-1368

Nitrite
14797-65-0
H-02
MW 30.00

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8021 Saliva		Colorimetry	a) 33 b) 16 c) 16 d) 35 e) 9 f) 13 g) 19 h) 13	a) Not given b) 5.2-43.8 ppm c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 11.1 +or- 2.9 ppm b) 20.4 +or- 4.4 ppm c) 8.9 +or- 1.3 ppm d) 16.7 +or- 3.0 ppm e) 19.8 +or- 2.2 ppm f) 1.6 +or- 0.39 ppm g) 1.7 +or- 0.13 ppm h) 6.02 +or- 1.66 ppm S.E.	a) Urban controls b) Urban tobacco chewers (range for 10 cases) c) Urban cigarette smokers d) Urban Bidi smokers (2 g coarse tobacco rolled in dry timburni leaf) e) Urban Hasheri users (half-burnt tobacco powder held under tongue) f) Rural controls g) Rural tobacco chewers h) Rural Hasheri users 15-20 ml sample expectorated over 15-20 min period Significant difference between a) and b), e) ($p<0.05$) Significant difference between h) and f), g) ($p<0.05$) No correlation between NO2 levels and NO2 reductase activity 20-50 yr old volunteers from Ghodegaon (rural) and Bombay (urban), India NITRITES; INDIA; ADULTS; SALIVA; ENZYMES; RURAL AREAS; SMOKING; TOBACCOS; URBAN AREAS	Hurdia, V.S. Mehta, F.J. Shide, S.V. 1982 Food Chemistry and Toxicology 20:269-271

o,p'-DDT, total (No postings in CHEMLINE).
789-02-6
C14-H9-Cl5
MW 354.49

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8022 Blood, serum		GC	a) 7 b) 8 c) 9 d) 7	a) Not given b) Not given c) Not given d) Not given	a) 9.08 +or- 7.15 ppb b) 12.84 +o- 8.91 ppb c) 16.00 +or- 11.22 ppb d) 29.93 +or- 25.37 ppb	a) Controls, normal 2nd trimester pregnancies, no missed abortions b) Low serum PCB, recent missed abortions (mean 1.62) c) High serum PCB, recent missed abortions (mean 1.50) d) Former missed abortions (mean 3.43) In missed abortions, products of conception were retained in utero at least 6 wk after fetal death, which occurred before week 20 of gestation. Women with missed abortions (mean age 28.1 yr for high PCB group) and controls (mean age 24.7 yr) ADULTS; BLOOD SERUM; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; PREGNANCY	Dercovici, B. Wassermann, M. Cucos, S. Ron, M. Wassermann, D. Pines, A. 1983 Environmental Research 30:169-174

Phenol
108-95-2
C6-H6-O
MW 94.11, MP 40.85 C, BP 182 C, VP 1 mm Hg at 40.1 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8023 Blood	Ingestion Dermal	UV	a) 1 b) 1	a) Not applicable b) Not applicable	a) 5.6 mg/dl b) 2.7 mg/dl	a) Suicide. Dose unknown. Blood ethanol level 30 mg/dl b) Accidental skin contamination with 30% solution. Died within 30 min. Blood ethanol level 30 mg/dl 43 and 17 yr olds a) Moderate edema of lungs. Gray, fixed appearance of mucosal lining of stomach. Pulmonary congestion and edema, coagulation of gastric mucosa, and extensive renal autolysis. b) Red areas on about 15% of body. Pulmonary edema. NORTH CAROLINA; ADULTS; AUTOPSIES; CASE HISTORIES; SUICIDE; BLOOD; LIVER; FORENSIC MEDICINE; PHENOLS; INDUSTRIAL ACCIDENTS; INDUSTRIAL CHEMICALS	Soares, H.R. Tift, J.P. 1982 Journal of Forensic Sciences 27(3):792-731
8024 Liver	Ingestion	UV	1	Not applicable	7.4 mg/100 mg wet wt	Suicide. Dose unknown. Blood ethanol level 30 mg/dl 43 yr old NORTH CAROLINA; ADULTS; AUTOPSIES; CASE HISTORIES; SUICIDE; BLOOD; LIVER; FORENSIC MEDICINE; PHENOLS; INDUSTRIAL ACCIDENTS; INDUSTRIAL CHEMICALS	Soares, H.R. Tift, J.P. 1982 Journal of Forensic Sciences 27(3):792-731

Phenol, pentachloro-
87-86-5
C6-H-Cl5-O
MW 266.35, MP 190-191 C, BP 309-310 C (decomp), VP 40 mm Hg at 211.2 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8025 Blood, plasma		GC	109	a) 25-190 ug/l b) 73-220 ug/l c) 31-34 ug/l d) 470-660 ug/l e) 320-440 ug/l f) 200-220 ug/l g) Not given-1100 ug/l	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) 128.6 +or- 134.9 ug/l	a) Family A, March 1979, lived in house from June 1978-February 1979, timber and furniture treated with 70 l of 5% PCP-solution several times during time of residence, (air level, 0.14-1.2 ug/cu m), advised to evacuate house, 4 cases b) Family A, 8 mo after return to house which had been heated and ventilated, (air level, none-detected-0.24 ug/cu m), 6 cases c) Family B, March 1979, after 10 days in house, basement treated with 75 l of 5% PCP-solution, (air level, none-detected-0.40 ug/cu m), 2 cases d) Family C, September 1979, after 1 mo in house treated with 100 l of 5.5% PCP-solution and linseed oil, 2 cases e) Family C, 19 days later, air level, 0.44-0.95 ug/cu m, heating and ventilation of house advised, 2 cases f) Family C, 4 mo after heating and ventilation (lived elsewhere for 1 mo), 2 cases g) Controls, 99 cases 3 familes, adults 25-51 yr old, children 10-19 yr old, living in houses treated with PCP-solution and non-selected male Dutch draftees, 18 yr old, The Netherlands. Headache, dizziness, fatigue, drowsiness, decreased appetite, nausea, painful deep breathing, swelling of eyelids, dryness and scaling of face and hands, generalized itching dermatosis, burning of skin, spontaneous abortion by one mother NETHERLANDS; ADOLESCENTS; ADULTS; CASE HISTORIES; CHILDREN; BLOOD PLASMA; URINE; FUNGICIDES; PENTACHLOROPHENOL; ATMOSPHERE; BIOACCUMULATION; PREGNANCY	Stangster, H. Wegman, R.C.C. Hofstee, A.W.M. 1982 Human Toxicology 1:123-133

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Phenol, pentachloro-
87-86-5
C6-H-Cl5-O
MW 266.35, MP 190-191 C, BP 309-310 C (decomp), VP 40 mm Hg at 211.2 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8026 Blood, plasma		CC GC-EC	a) 1 b) 1	a) Not applicable b) Not applicable	a) 390 ppb b) 180 ppb	a) Commercial pesticide operator b) Individual believed exposed at residence Suspected pesticide poisonings BLOOD PLASMA; URINE; MEASUREMENT METHODS; CHLORINE ORGANIC COMPOUNDS; PENTACHLOROPHENOL; PESTICIDES; HUMANS; METABOLITES; OCCUPATIONAL HAZARDS; PESTICIDE RESIDUES	Tabei, G.H. Lee, H.H. 1981 Bulletin of Environmental Contamination and Toxicology 27:842-849
8027 Blood, serum	Inhalation Dermal		4	a) Not given b) Not given c) Not given d) Not given	a) 27.8 ppm b) 38.2 ppm c) 29.2 ppm d) 20.8 ppm	a) Worker A b) Worker B c) Worker C d) Supervisor Wood preservative manufacturing plant employees Weakness, vomiting, diaphoresis, hyperpyrexia, abdominal pain ADULTS; NERVOUS SYSTEM DISEASES; URINE; BLOOD BENZ; INDUSTRIAL MEDICINE; PENTACHLOROPHENOL; PESTICIDES; ACCIDENTAL POISONING; INDUSTRIAL ATMOSPHERES; INDUSTRIAL PLANTS	Wood, E. Ram, W.M. White, G.L. Logan, D.C. 1983 Journal of Occupational Medicine 25(7):527-530

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Phenol, pentachloro-
87-86-5
C6-H-Cl5-O
MW 266.35, MP 190-191 C, BP 309-310 C (decomp), VP 40 mm Hg at 211.2 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8026 Urine		GC	6	a) 0.7-7.8 ug/l b) 2.0-15.0 ug/l c) 1.8-8.0 ug/l	a) Not given b) Not given c) Not given	a) January 26, 1979, family lived in house since June 1978, timber and furniture treated with 70 l of 5% PCP-solution during time of residence b) February 5, 1979, level in air 0.14-1.2 ug/cu m, family advised to evacuate house c) March 16, 1979, family in residence elsewhere while house heated and ventilated Plasma levels 25-190 ug/l Parents (47 and 51 yr old) and 4 daughters (10-19 yr old), The Netherlands Generalized itching dermatosis, localized burning of skin, nausea and vomiting. Papules, pustules, and vesicles on whole body, lesions caused by scratching, and burrows characteristic of scabies between fingers, on wrist, or back NETHERLANDS; ADOLESCENTS; ADULTS; CASE HISTORIES; CHILDREN; BLOOD PLASMA; URINE; FUNGICIDES; PENTACHLOROPHENOL; ATMOSPHERE; BIOACCUMULATION; PREGNANCY	Stangster, B. Wegman, R.C.C. Hofstee, A.W.M. 1982 Human Toxicology 1:123-133
8025 Urine		GC GC-EC	a) 1 b) 1	a) Not applicable b) Not applicable	a) 190 ppb b) 41 ppb	a) Commercial pesticide operator b) Individual believed exposed at residence Suspected pesticide poisonings BLOOD PLASMA; URINE; MEASUREMENT METHODS; CHLORINE ORGANIC COMPOUNDS; PENTACHLOROPHENOL; PESTICIDES; ENZYMES; METABOLITES; OCCUPATIONAL HAZARDS; PESTICIDE RESIDUES	Takei, G.H. Lee, H.H. 1981 Bulletin of Environmental Contamination and Toxicology 27:842-849
8030 Urine		HPLC	1	Not applicable	11.2 +or- 1.5 mg/l	Total pentachlorophenol (including metabolites), 10 samples from exposed worker. URINE; INDUSTRIAL HYGIENE; MEASUREMENT METHODS; CHLORINE ORGANIC COMPOUNDS; PENTACHLOROPHENOL; PESTICIDES	Drummond, I. Van Roosmalen, P.H. Koraicki, H. 1982 International Archives of Occupational and Environmental Health 50:321-327

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Phenol, pentachloro-
87-86-5
C6-H-Cl5-O
MW 266.35, MP 190-191 C, BP 309-310 C (decomp), VP 40 mm Hg at 211.2 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8031 Urine	Inhalation Dermal		4	a) Not given b) Not given c) Not given d) Not given	a) 10.0 ppm b) 13.8 ppm c) 13.6 ppm d) 2.5 ppm	a) Worker A b) Worker B c) Worker C d) Supervisor Wood preservative manufacturing plant employees Weakness, vomiting, diaphoresis, hyperpyrexia, abdominal pain ADULTS; NERVOUS SYSTEM DISEASES; URINE; BLOOD SERUM; INDUSTRIAL MEDICINE; PENTACHLOROPHENOL; PESTICIDES; ACCIDENTAL POISONING; INDUSTRIAL ATMOSPHERES; INDUSTRIAL PLANTS	Wood, E. Ross, W.H. White, G.L. Logan, D.C. 1983 Journal of Occupational Medicine 25(7):527-530

Phenol, 2-methoxy-
90-05-1
C7-H8-O2
MW 124.13, MP 28 C, BP 200-206 C, VP 1 mm Hg at 5.24 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8032 Urine	Ingestion Inhalation	GC	a) 11 b) 7 c) 5	a) Not detected-7.2 mg/24 hr b) 6.6-11 mg/24 hr c) 2.1-8.2 mg/24 hr	a) 3.4 +or- 2.3 mg/24 hr b) 8.1 +or- 1.7 mg/24 hr c) 6.1 +or- 2.6 mg/24 hr	a) Nonsmokers, unrestricted diet b) Nonsmokers, restricted diet lacking fresh fruits, vegetables, coffee, tea, wine or fruit juices c) Smokers, unrestricted diet Healthy 20-56 yr olds, 55-77 kg. ADULTS; URINE; DIETS; SMOKING	Carmella, S.G. LaVoie, E.J. Hecht, S.S. 1982 Food and Chemical Toxicology 20:587-590

Phosphonic acid, (2,2,2-trichloro-1-hydroxyethyl)-, dimethyl ester
52-68-6
C4-H8-Cl3-O4-P
MW 257.45, MP 83-84 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8033 Blood, cells		GS/MS	2	a) 2.1-2.7 ug/ml b) 0.012-0.015 ug/ml c) 1.1-1.5 ug/ml d) 0.005-0.01 ug/ml	a) Not given b) Not given c) Not given d) Not given	a) Metrifonate, about 0.5-1 hr after 10 mg/kg b) Dichlorvos (metabolite), about 0.5-1 hr after 10 mg/kg c) Metrifonate, about 0.5-1.5 hr after 7.5 or 10 mg/kg d) Dichlorvos, about 0.5-1.5 hr after 7.5 or 10 mg/kg Peaks, 2 treatments, 2 wk apart. Estimated from graph Schistosomiasis patients, Zambia and Malawi Plasma cholinesterase activity at zero within 15 min, in erythrocytes activity inhibited only 60-80%. Mild vertigo most common side effect ZAMBIA; MALAWI; BLOOD PLASMA; ERYTHROCYTES; DRUG THERAPY; DRUGS; ANTIHELMINTHIC; MEASUREMENT METHODS; ORGANOPHOSPHATES; ENZYMES; METABOLITES	Nordgren, I. Bengtsson, E. Holmstedt, B. Pettersson, S.-H. 1981 Acta Pharmacologica et Toxicologica 49(suppl. V):79-86
8034 Blood, plasma		GS/MS	2	a) 6.3-8.4 ug/ml b) 0.002-0.003 ug/ml c) 4.2-5.6 ug/ml d) 0.041-0.059 ug/ml	a) Not given b) Not given c) Not given d) Not given	a) Metrifonate, about 0.5 hr after 10 mg/kg b) Dichlorvos (metabolite), about 0.5 hr after 10 mg/kg c) Metrifonate, 1 and 2 hr after 7.5 or 10 mg/kg d) Dichlorvos (metabolite), 1 and 2 hr after 7.5 or 10 mg/kg Peaks, 2 treatments 2 wk apart. Estimated from graph Schistosomiasis patients, Zambia and Malawi Plasma cholinesterase activity at zero within 15 min, in erythrocytes activity inhibited only 60-80%. Mild vertigo most common side effect ZAMBIA; MALAWI; BLOOD PLASMA; ERYTHROCYTES; DRUG THERAPY; DRUGS; ANTIHELMINTHIC; MEASUREMENT METHODS; ORGANOPHOSPHATES; ENZYMES; METABOLITES	Nordgren, I. Bengtsson, E. Holmstedt, B. Pettersson, S.-H. 1981 Acta Pharmacologica et Toxicologica 49(suppl. V):79-86

Phosphorus
7723-14-0
P
AtW 30.97376, MP 44.1 C, BP 280 C, VP 10 mm Hg at 127 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8035 Blood	Ingestion	Colorimetry	6	a) 3.8-4.9 mg/100 ml b) 4.0-5.7 mg/100 ml c) 3.8-5.0 mg/100 ml d) 3.9-4.9 mg/100 ml	a) 4.2 mg/100 ml b) 4.7 mg/100 ml c) 4.5 mg/100 ml d) 4.4 mg/100 ml	a) 0.9 g N/day and 140 mg Ca/day b) 12 g N/day and 106 mg Ca/day c) 24 g N/day and 86 mg Ca/day d) 12 g N/day and 1,000 mg Ca/day Intake for 15 days. Fasting sample at end of period. No variation from change in diet 22-32 yr olds, 50-62 kg, 172-192 cm SWEAT; ADULTS; BLOOD; SKIN; URINE; CALCIUM; MAGNESIUM; PHOSPHORUS; PROTEINS; DIETS; METABOLISM	Chu, J-Y. Margen, S. Costa, F.H. 1975 American Journal of Clinical Nutrition 28(9):1028-1038
8036 Blood, plasma		Colorimetry	177	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given	a) 0.57 +or- 1.42 mg% b) 2.80 +or- 0.25 mg% c) 3.05 +or- 0.10 mg% d) 3.20 +or- 0.10 mg% e) 3.12 +or- 0.30 mg% f) 3.25 +or- 0.30 mg% g) 2.90 +or- 0.00 mg% h) 2.93 +or- 0.10 mg% i) 3.30 +or- 0.35 mg% j) 3.72 +or- 0.50 mg%	a) 5th mo pregnancy, 8 cases b) 6th mo pregnancy, 29 cases c) 7th mo pregnancy, 58 cases d) 8th mo pregnancy, 68 cases e) 9th mo pregnancy, 14 cases f) Family income <1000 Naira, 19 cases g) Family income 1000-2000 Naira, 111 cases h) Family income 2001-3000 Naira, 35 cases i) Family income 3001-4000 Naira, 5 cases j) Family income >4000 Naira, 7 cases Significant differences a),b). No significant differences due to family income. Pregnant women, Ibadan, Nigeria NUTRITIONAL DEFICIENCIES; BLOOD PLASMA; CALCIUM; MAGNESIUM; PHOSPHORUS; DIETS; FOODS; PREGNANCY; NIGERIA	Akinyelu, L.O. Akinyele, I.O. 1977 Nutrition Reports International 16(5):887-893

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Phosphorus
7723-14-0
P
AtW 30.97376, MP 44.1 C, BP 280 C, VP 10 mm Hg at 127 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8037 Blood, plasma	Ingestion	Colorimetry	14	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 2.06 +or- 0.13 mmol b) 1.32 +or- 0.12 mmol c) 1.86 +or- 0.12 mmol d) 1.29 +or- 0.16 mmol e) 2.18 +or- 0.14 mmol f) 2.13 +or- 0.19 mmol g) 2.53 +or- 0.11 mmol h) 2.24 +or- 0.03 mmol S.E.	a) Infants fed mothers' milk, start of study, 6 cases b) At 1 wk, 6 cases c) At 2 wk, 6 cases d) At 4 wk, 5 cases e) Infants fed formula, start of study, 5 cases f) At 1 wk, 5 cases g) At 2 wk, 5 cases h) At 4 wk (+ supplements NaHCO3, Ca-lactate), 5 cases Hypophosphatemic developed in infants fed mothers' milk. Significant difference between the two groups ($p<0.01$). Premature infants, birth wt <1.3 kg, mean gestation time 28 wk, Canada PREMATURE INFANTS; CANADA; NUTRITIONAL DEFICIENCIES; BLOOD PLASMA; MILK; COMPARATIVE EVALUATIONS; CALCIUM; MAGNESIUM; MINERALS; PHOSPHORUS; POTASSIUM; SODIUM; FOODS; LACTATION	Atkinson, S.A. Radde, I.C. Anderson, G.H. 1983 Journal of Pediatrics 102(1):99-104
8038 Kidney		ICP-AES	a) 42 b) 39	a) 749-2610 mg/kg b) 560-2450 mg/kg Wet wt	a) 1685 mg/kg b) 1525 mg/kg Wet wt Medians	a) Cortex b) Medulla Autopsies within 48 hr Normal adults, Great Lakes region, Ontario, Canada CANADA; ADULTS; AUTOPSIES; KIDNEYS; LIVER; MEASUREMENT METHODS; CADMIUM; CALCIUM; COPPER; IRON; MAGNESIUM; MANGANESE; PHOSPHORUS; POTASSIUM; SODIUM; ZINC	Subramanian, K.S. Meranger, J.C. 1982 Science of the Total Environment 24:147-157
8039 Liver		ICP-AES	44	1570-3240 mg/kg wet wt	2500 mg/kg wt wt Median	Autopsies within 48 hr Normal adults, Great Lakes region, Ontario, Canada CANADA; ADULTS; AUTOPSIES; KIDNEYS; LIVER; MEASUREMENT METHODS; CADMIUM; CALCIUM; COPPER; IRON; MAGNESIUM; MANGANESE; PHOSPHORUS; POTASSIUM; SODIUM; ZINC	Subramanian, K.S. Meranger, J.C. 1982 Science of the Total Environment 24:147-157

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Phosphorus
7723-14-0
P
AtW 30.97376, MP 44.1 C, BP 280 C, VP 10 mm Hg at 127 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8040 Milk		Colorimetry	7	a) Not given b) Not given c) Not given	a) 6.84 +or- 0.52 mmol b) 5.13 +or- 0.29 mmol c) 5.66 +or- 0.61 mmol S.E.	a) 6-8 days postpartum b) 13-15 days postpartum c) 26-28 days postpartum Mothers of premature infants. Infant birth wt <1.3 kg, mean gestational age 28 wk, Canada PREMATURE INFANTS; CANADA; NUTRITIONAL DEFICIENCIES; BLOOD PLASMA; MILK; COMPARATIVE EVALUATIONS; CALCIUM; MAGNESIUM; MINERALS; PHOSPHORUS; POTASSIUM; SODIUM; FOODS; LACTATION	Atkinson, S.A. Hadden, I.C. Anderson, G.H. 1983 Journal of Pediatrics 102(1):99-104
8041 Sweat						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).

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Phosphorus
7723-14-0
P
AEW 30.97376, MP 44.1 C, BP 280 C, VP 10 mm Hg at 127 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8042 Urine	Ingestion	Colorimetry	17	a) 27-243 mg/day b) 455-713 mg/day c) Not given d) 486-489 mg/day e) 2-18 mg/day f) 368-510 mg/day	a) Not given b) Not given c) 111 mg/day d) Not given e) Not given f) Not given	a) 90-120 ml of antacids, and low Ca intake (230-285 mg/day). P intake 755-925 mg/day. Fecal P 517-956 mg/day. P balance -76 to +69 mg/day b) Controls. Low Ca intake (211-252 mg/day). P intake 755-917 mg/day. Fecal P 193-247 mg/day. P balance -61 to +96 mg/day c) 90 ml Maalox. Normal Ca intake (866 mg/day). P intake 869 mg/day. Fecal P 673 mg/day. P balance 84 mg/day d) Controls. Normal Ca intake (851-855 mg/day). P intake 898 mg/day. Fecal P 281-291 mg/day. P balance 83-88 mg/day e) 240 or 450 ml Maalox/day. Ca intake 225-346 mg/day. P intake 687-1807 mg/day. Fecal P 699-1148 mg/day. P balance -14 to -154 mg/day f) Controls. Ca intake 185-253 mg/day. P intake 733-922 mg/day. Fecal P 207-314 mg/day. P balance 35-194 mg/day. 42-70 yr olds in metabolic research ward. ADULTS; URINE; CALCIUM; PHOSPHORUS; MINERAL METABOLISM	Spencer, H. Kramer, L. Norris, C. Gsis, D. 1982 American Journal of Clinical Nutrition 36:32-40

Plutonium
7440-07-5
Pu
AtW 242, 244 (most stable known isotopes), MP 639.5 C (also reported as 641 C), BP 3232 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0043 Bone		Radiometry Alpha spectrometry	43	a) 0.03-1.92 pCi/kg b) Not applicable c) Not given Wet wt	a) 1.10 +or- 0.63 pCi/kg b) 0.24 +or- 0.08 pCi/kg c) 0.48 +or- 0.01 pCi/kg Wet wt	a) Japan, 9 vertebra b) Japan, 1 femur c) United States, 34 vertebra Ash weight basis. Autopsies 22-63 yr olds, Japan and U.S. Data from Los Alamos tissue data base, 1976 JAPAN; UNITED STATES; AUTOPSIES; BONES; KIDNEYS; LIVER; LUNGS; COMPARATIVE EVALUATIONS; PLUTONIUM; BIOACCUMULATION; POPULATION EXPOSURE; RADIOISOTOPES	Kawamura, H. Tanaka, G. McInroy, J.F. Butsler, B.C. 1981 Journal of Radiation Research 22:373-388
0044 Bone		Spectrometry	6	0.13-0.28 pCi/kg Wet wt	Not given	Vertebrae, sample size 80-500 g. Non-occupational exposure. Error 18-30% THORIUM; BONES; LIVER; LUNGS; LYMPH NODES; MEASUREMENT METHOD; METALS; PLUTONIUM; FALLOUT; POPULATION EXPOSURE; RADIOISOTOPES; RADIONUCLIDES	Singh, N.P. Ibrahim, S.A. Cohen, N. Wrenn, M.E. 1979 Analytical Chemistry 51(13):1976-1981
0045 Kidney		Radiometry Alpha spectrometry	a) 5 b) 23	a) 0-0.10 pCi/kg b) Not given Wet wt	a) 0.02 +or- 0.04 pCi/kg b) 0.22 +or- 0.55 pCi/kg Wet wt	a) Japan b) United States Autopsies. Measured as Pu 239/240 21-69 yr olds, Japan and U.S. Data from Los Alamos tissue data base, 1970 JAPAN; UNITED STATES; AUTOPSIES; BONES; KIDNEYS; LIVER; LUNGS; COMPARATIVE EVALUATIONS; PLUTONIUM; BIOACCUMULATION; POPULATION EXPOSURE; RADIOISOTOPES	Kawamura, H. Tanaka, G. McInroy, J.F. Butsler, B.C. 1981 Journal of Radiation Research 22:373-388
0046 Liver		Radiometry Alpha spectrometry	a) 10 b) 32	a) 0.13-1.47 pCi/kg b) Not given Wet wt	a) 0.57 +or- 0.37 pCi/kg b) 1.10 +or- 0.91 pCi/kg Wet wt	a) Japan b) United States Autopsies. Measured as Pu 239/240 21-69 yr olds, Japan and U.S. Data from Los Alamos tissue data base, 1970 JAPAN; UNITED STATES; AUTOPSIES; BONES; KIDNEYS; LIVER; LUNGS; COMPARATIVE EVALUATIONS; PLUTONIUM; BIOACCUMULATION; POPULATION EXPOSURE; RADIOISOTOPES	Kawamura, H. Tanaka, G. McInroy, J.F. Butsler, B.C. 1981 Journal of Radiation Research 22:373-388

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Plutonium
7440-07-5
Pu
AtW 242, 244 (most stable known isotopes), MP 639.5 C (also reported as 641 C), BP 3232 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8047 Liver		Spectrometry	6	a) 0.18-5.9 pCi/kg b) 0.04-0.12 pCi/kg Wet wt	a) Not given b) Not given	a) Pu 239,240. Non-occupational exposure Error 10-20%. b) Pu 238. Error 10-50% THORIUM; BONES; LIVER; LUNGS; LYMPH NODES; MEASUREMENT METHODS; METALS; PLUTONIUM; FALLOUT; POPULATION EXPOSURE; RADIOISOTOPES; RADIONUCLIDES	Singh, N.P. Ibrahim, S.A. Cohen, N. Wrenn, M.E. 1979 Analytical Chemistry 51(12):1978-1981
8046 Lung		Radiometry Alpha spectrom	a) 10 b) 35	a) 0.12-0.61 pCi/kg b) Not given Wet wt	a) 0.23 +or- 0.09 pCi/kg b) 0.49 +or- 0.44 pCi/kg Wet wt	a) Japan b) United States Autopsies. Measured as Pu 239/240 21-69 yr olds, Japan and U.S. Data from Los Alamos tissue data base, 1978 JAPAN; UNITED STATES; AUTOPSIES; BONES; KIDNEYS; LIVER; LUNGS; COMPARATIVE EVALUATIONS; PLUTONIUM; BIOACCUMULATION; POPULATION EXPOSURE; RADIOISOTOPES	Kawamura, H. Tanaka, G. McInroy, J.F. Butsler, B.C. 1981 Journal of Radiation Research 22:373-380
8048 Lung		Spectrometry	5	0.10-0.22 pCi/kg	Not given	Non-occupational exposure. THORIUM; BONES; LIVER; LUNGS; LYMPH NODES; MEASUREMENT METHODS; METALS; PLUTONIUM; FALLOUT; POPULATION EXPOSURE; RADIOISOTOPES; RADIONUCLIDES	Singh, N.P. Ibrahim, S.A. Cohen, N. Wrenn, M.E. 1979 Analytical Chemistry 51(12):1978-1981
8050 Lymph node		Spectrometry	6	0.52-1.1 pCi/kg Wet wt	Not given	Non-occupational exposure THORIUM; BONES; LIVER; LUNGS; LYMPH NODES; MEASUREMENT METHODS; METALS; PLUTONIUM; FALLOUT; POPULATION EXPOSURE; RADIOISOTOPES; RADIONUCLIDES	Singh, N.P. Ibrahim, S.A. Cohen, N. Wrenn, M.E. 1979 Analytical Chemistry 51(12):1978-1981

Polybrominated biphenyls (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8851 Adipose			844	a) Not detected-36,700 ppb b) Not given c) Not given	a) 400 +or- 1,349 ppb b) <2 ppb c) >1000 ppb	a) Entire state, 844 adults, 821 (97%) positive b) 15% (13 of 87) in upper peninsula, 0.4% (1 of 255) in Detroit area, 1% (1 of 84) in Muskegon area, 2% (8 of 418) for remainder of state c) 0% (0 of 87) in upper peninsula, 1.6% (4 of 255) in Detroit area, 32% (27 of 84) in Muskegon area, 7.9% (33 of 418) for remainder of state Level correlated with serum level, adipose/serum ratio 388:1 Weighted probability sample, 1978 population, 5 yr after contamination of livestock feed, MI MICHIGAN; ADULTS; AGE; CHILDREN; SEX; ADIPOSE TISSUE; BLOOD SERUM; DDE; PESTICIDES; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FIRE RETARDANTS; FOOD CONTAMINATION; PESTICIDE RESIDUES; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Wolff, M.S. Anderson, H.A. Selikoff, I.J. 1982 Journal of the American Medical Association 247(15):2112-2116

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Polybrominated biphenyls (No postings in CHEMLINE).

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8852 Adipose	Ingestion			a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 1965 +or- 356 ppb b) 516 +or- 92 ppb c) 226 +or- 73 ppb d) 0 ppb e) 0 ppb f) 82 +or- 36 ppb g) 1000 +or- 209 ppb h) Not given S.E.	a) Quarantined farmers, 53 cases b) Non-quarantined farmers, 29 cases c) City residents, 9 cases d) Out-of-state residents, 20 cases e) Foreign students living in state 1 yr, 5 cases f) Foreign students living in state 2 yr, 5 cases g) Foreign students living in state 3 yr, 5 cases h) 116 positive adipose samples. 35 with positive serum (0.1-20.6 ppb) Consumption levels ranged from several thousand ppm in meat to <1 ppm in milk. Heaviest population exposure probably when contamination was undetected. Levels decreased with time (mean decrease, 40% in 6 mo). Residents and non-residents after contamination of livestock feed, May 1973-May 1974, Michigan. Measurements made 1973-1976. Extreme fatigue, joint pain and stiffness, headache, muscle pain, dizziness, backache, blurred vision, somnolence, nervousness and irritability, skin rash, abdominal pain, diarrhea MICHIGAN; ADOLESCENTS; ADULTS; CHILDREN; DERMATITIS; NEUROMUSCULAR DISEASES; RHEUMATOID ARTHRITIS; SKIN DISEASES; ADIPOSE TISSUE; BLOOD SERUM; MILK; POLYBROMINATED BIPHENYLS; ANIMAL POPULATIONS; BIOACCUMULATION; FARMS; FOOD CONTAMINATION; FOODS; HEALTH HAZARDS; POPULATION EXPOSURE	Meester, W.D. McCoy, B.J. 1976 Symposium on Environmental Toxicology, Seattle, WA, August 4, 1976, 12 pp.
8853 Adipose		GC	a) 32 b) 56 c) 29 e) 83	a) None detected-174,000 ug/kg b) None detected-619 ug/kg c) 400-350,500 ug/kg d) 70,000-350,000 ug/kg	a) 330 ug/kg b) 570 ug/kg c) 5,290 ug/kg d) 1,650 ug/kg e) Geometric means	a) Pregnant females b) Nonpregnant females c) Male chemical workers d) Farmers and other male workers Correlated with serum levels Residents, MI MICHIGAN; ADULTS; ADIPOSE TISSUE; BILE; BLOOD SERUM; MILK; PLACENTA; COMPARATIVE EVALUATIONS; POLYBROMINATED BIPHENYLS; ACCIDENTAL POISONING; BIOACCUMULATION; FARMS; FOOD CONTAMINATION; LACTATION; OCCUPATIONAL HAZARDS; POPULATION EXPOSURE; PREGNANCY	Eyster, J.T. Humphrey, H.E.B. Kimbrough, R.D. 1983 Archives of Environmental Health 38(1):47-53

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Polybrominated biphenyls (No postings in CHEMLINE).

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8054 Adipose	Ingestion		a) 10 b) 9	a) 20.960-0.116 ppm b) 0.074-0.010 ppm	a) 6.218 +or- 6.710 ppm b) 0.050 +or- 0.019 ppm	a) High exposure (>0.100 ppm) b) Low exposure (<0.100 ppm) Significant inverse correlation ($p<0.05$) between levels and scores on 4 of 5 developmental abilities tests. Children, 2 yr 5 mo to 3 yr 11 mo old, exposed in utero or in infancy, MI MICHIGAN; CHILDREN; ADIPOSE TISSUE; BIOPSIES; POLYBROMINATED BIPHENYLS; ACCIDENTAL POISONING; BIOACCUMULATION; FOOD CONTAMINATION; LACTATION; PREGNANCY	Seagull, E.A.W. 1983 American Journal of Public Health 73(3):281-285
8055 Bile		GC	20	None detected-70 ug/l	2.7 ug/l Geometric mean	Farm and chemical workers. Correlated with serum levels. Residents, MI MICHIGAN; ADULTS; ADIPOSE TISSUE; BILE; BLOOD SERUM; MILK; PLACENTA; COMPARATIVE EVALUATIONS; POLYBROMINATED BIPHENYLS; ACCIDENTAL POISONING; BIOACCUMULATION; FARMS; FOOD CONTAMINATION; LACTATION; OCCUPATIONAL HAZARDS; POPULATION EXPOSURE; PREGNANCY	Hyster, J.T. Humphrey, H.E.B. Kimbrough, R.D. 1983 Archives of Environmental Health 38(1):47-53

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Polybrominated biphenyls (No postings in CHEMLINE).

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8054 Blood, serum			1681	a) Undetected-37.2 ppb b) Undetected-120.5 ppb c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given m) Not given n) Not given o) Not given p) Not given q) Not given r) Not given	a) 1.8 +or- 3.3 ppb b) 1.3 +or- 3.9 ppb c) 0.6 +or- 0.4 ppb d) 0.3 +or- 0.3 ppb e) 0.6 +or- 0.6 ppb f) 0.3 +or- 0.4 ppb g) 4.9 +or- 5.3 ppb h) 3.8 +or- 5.2 ppb i) 4.0 +or- 3.3 ppb j) 2.1 +or- 2.5 ppb k) 2.1 +or- 3.7 ppb l) 1.0 +or- 0.9 ppb m) 1.5 +or- 1.7 ppb n) 1.2 +or- 5.9 ppb o) 0.81 +or- 0.97 ppb p) 1.4 +or- 2.7 ppb q) 2.2 +or- 2.7 ppb r) 2.6 +or- 3.7 ppb	a) Children under 18 yr, 461 samples, 335 (72.7%) positive b) Adults 18 yr and over, 1220 samples, 840 (68.9%) positive c) Boys, upper peninsula, 26 samples d) Girls, upper peninsula, 32 samples e) Men, upper peninsula, 88 samples f) Women, upper peninsula, 86 samples g) Boys, Muskegon County, 36 samples h) Girls, Muskegon County, 27 samples i) Men, Muskegon County, 94 samples j) Women, Muskegon County, 74 samples k) Boys, rest of state, 187 samples l) Girls, rest of state, 153 samples m) Men, rest of state, 456 samples n) Women, rest of state, 462 samples o) Women from 129 familes, matched for age (37 +or- 10 yr) p) Girls from o), matched for age (10 +or- 5 yr) q) Men from 148 families, matched for age (37 +or- 10 yr) r) Boys from q), matched for age (10 +or- 5 yr) Levels not co/related with age. Levels highest in Muskegon County (food contaminated), lowest upper peninsula, away from source of contamination. Weighted probability sample, 1976 population, 5 yr after contamination of livestock feed, MI MICHIGAN; ADULTS; AGE; CHILDREN; SEX; ADIPOSE TISSUE; BLOOD SERUM; DDE; PESTICIDES; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FIRE RETARDANTS; FOOD CONTAMINATION; PESTICIDE RESIDUES; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Wolff, M.S. Anderson, H.A. Selikoff, I.J. 1982 Journal of the American Medical Association 247(15):2112-2116

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Polybrominated biphenyls (No postings in CHEMLINE).

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8057 Blood, serum	Ingestion			a) 0.1-28.6 ppb b) Not given c) Not given	a) Not given b) 2.0 +or- 0.33 ppb c) 0.2 +or- 0.05 pb S.E.	a) 35 samples, April 1975-June 1976 b) 56 samples, June 1975-December 1975 c) 77 samples, January 1976-June 1976 15 foreign students living in state 1-3 yr all negative. Levels decreased with time. Michigan residents after contamination of livestock feed, May 1973-May 1974. Extreme fatigue, joint pain and stiffness, headache, muscle pain, dizziness, backache,, blurred vision, somnolence, nervousness and irritability, skin rash, abdominal pain, diarrhea MICHIGAN; ADOLESCENTS; ADULTS; CHILDREN; DERMATITIS; NEUROMUSCULAR DISEASES; RHEUMATOID ARTHRITIS; SKIN DISEASES; ADIPOSE TISSUE; BLOOD SERUM; MILK; POLYBROMINATED BIPHENYLS; ANIMAL POPULATIONS; BIOACCUMULATION; FARMS; FOOD CONTAMINATION; FOODS; HEALTH HAZARDS; POPULATION EXPOSURE	Hoester, M.D. McCoy, D.J. 1976 Symposium on Environmental Toxicology, Seattle, WA, August 4, 1976, 12 pp.
8058 Blood, serum		GC	a) 61 b) 60 c) 56 d) 29 e) 83	a) None detected-1,868 ug/l b) None detected-104 ug/l c) None detected-873 ug/l d) 1-1,200 ug/l e) None detected-1,515 ug/l	a) 3.5 ug/l b) Not given (median <1 ug/l) c) 3.1 ug/l d) 25.8 ug/l e) 5.4 ug/l Geometric means	a) Pregnant females b) Cord blood c) Nonpregnant females d) Male chemical workers e) Farmers and other male workers Levels in maternal serum correlated with levels in placenta, cord blood, and maternal adipose. Levels in nonpregnant females, chemical workers, and farmers also correlated with levels in adipose. tissue. Residents, MI MICHIGAN; ADULTS; ADIPOSE TISSUE; BILE; BLOOD SERUM; MILK; PLACENTA; COMPARATIVE EVALUATIONS; POLYBROMINATED BIPHENYLS; ACCIDENTAL POISONING; BIOACCUMULATION; FARMS; FOOD CONTAMINATION; LACTATION; OCCUPATIONAL HAZARDS; POPULATION EXPOSURE; PREGNANCY	Ryster, J.T. Humphrey, H.E.B. Kimbrough, R.D. 1983 Archives of Environmental Health 38(1):47-53

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Polybrominated biphenyls (No postings in CHEMLINE).

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8019 Blood, serum	Ingestion Inhalation Dermal		a) 10 b) 45 c) 27 d) 137 e) 321 f) 10 g) 104 h) 177 i) 222	a) 11.4-1729 ppb b) 4-234 ppb c) 0.2-64.2 ppb d) 0-962.4 ppb e) 0.2-1778.0 ppb f) 0.2-37.4 ppb g) 0-42.6 ppb h) 0-94.0 ppb i) None detected	a) 603.9 ppb b) 16.5 ppb c) 10.15 ppb d) 27.22 ppb e) 24.42 ppb f) 6.42 ppb g) 3.25 ppb h) 3.03 ppb i) None detected	a) Workers directly involved in manufacturing and processing of polybrominated biphenyls (PBB) b) Other plant employees c) Quarantined farm residents, 0-5 yr old (livestock serum samples >0.3 ppm) d) Quarantined farm residents, 6-18 yr old e) Quarantined farm residents, >18 yr old f) Nonquarantined farm residents, 0-5 yr old (livestock serum samples <0.3 ppm) g) Nonquarantined farm residents, 6-18 yr old h) Nonquarantined farm residents, >18 yr old i) Control farm residents with no history of PBB exposure, 0->18 yr old (PBB nondetectable in 222 of 226 samples) MI chemical company workers, MI farm residents, and nonexposed WI farm residents, 1976-77, after accidental livestock feed contamination in 1973-74 Skin symptomatology: peeling, scaling, erythema, hair loss, increased nail growth, increased sweating, itching, dryness, diffuse alopecia, halogen acne, folliculitis, irritant or allergic contact dermatitis MICHIGAN; WISCONSIN; ADULTS; CHILDREN; SKIN DISEASES; BLOOD SERUM; POLYBROMINATED BIPHENYLS; BIOACCUMULATION; FARMS; FIRE RETARDANTS; FOOD CONTAMINATION; INHALATION; POPULATION EXPOSURE; RURAL AREAS	Chanda, J.J. Anderson, H.A. Glomb, R.W. Lomatch, D.L. Wolff, M.S. Voorhees, J.J. Selikoff, I.J. 1982 Environmental Research 29:97-108

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Polybrominated biphenyls (No postings in CHEMLINE).

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8060 Blood, serum	Ingestion	Chem	3083	<1-3150 ug/l	23.2 ug/l	Higher levels in men Median decrease in 816 and 833 matched pairs was 1 ug/l during both 1- and 2-yr intervals. Median decrement increased at higher levels Residents of quarantined farms with high contamination, recipients of food products from quarantined farms, workers at PBB manufacturing plant, residents of farms with low contamination, 1977, MI MICHIGAN; ADULTS; CHILDREN; BLOOD SERUM; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; AGRICULTURE; ANIMAL POPULATIONS; BIOACCUMULATION; FARMS; FOOD CONTAMINATION; HEALTH HAZARDS; POPULATION EXPOSURE; RURAL AREAS	Eroise, K. Roberts, C. Humphrey, H.E.B. 1982 Archives of Environmental Health 37(3):141-146
8061 Blood, serum	Ingestion	GC	1631	<1-57 ug/l	7.7 ug/l	Higher levels in men Log of levels increased significantly with age (P<0.0001) Residents of quarantined farms with high contamination, recipients of food products from quarantined farms, workers at PBB manufacturing plant, residents of farms with low contamination, 1970, 1979, MI MICHIGAN; ADULTS; CHILDREN; BLOOD SERUM; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; AGRICULTURE; ANIMAL POPULATIONS; BIOACCUMULATION; FARMS; FOOD CONTAMINATION; HEALTH HAZARDS; POPULATION EXPOSURE; RURAL AREAS	Eroise, K. Roberts, C. Humphrey, H.E.B. 1982 Archives of Environmental Health 37(3):141-146

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Polybrominated biphenyls (No postings in CHEMLINE).

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8062 Milk	Ingestion		a) 5 b) 3	a) 0.210-92.650 ppm b) 0-0 ppm	a) Not given b) Not given	a) Late 1974, early 1975 (Data from Humphrey and Hayner) b) Early 1976. Fat levels 185-345 ppb Low fat levels should not contraindicate nursing Michigan residents, after contamination of livestock feed, May 1973-May 1974 Extreme fatigue, joint pain and stiffness, headache, muscle pain, dizziness, backache, blurred vision, somnolence, nervousness and irritability, skin rash, abdominal pain, and diarrhea MICHIGAN; ADOLESCENTS; ADULTS; CHILDREN; DERMATITIS; NEUROMUSCULAR DISEASES; RHEUMATOID ARTHRITIS; SKIN DISEASES; ADIPOSE TISSUE; BLOOD SERUM; MILK; POLYBROMINATED BIPHENYLS; ANIMAL POPULATIONS; BIOACCUMULATION; FARMS; FOOD CONTAMINATION; FOODS; HEALTH HAZARDS; POPULATION EXPOSURE	Hoester, W.D. McCoy, D.J. 1976 Symposium on Environmental Toxicology, Seattle, WA, August 4, 1976, 12 pp.
8063 Milk			47	None detected-92,667 ug/kg	312.4 ug/kg Geometric mean	Lipid basis 3-5 days after parturition Correlation with levels in maternal serum and adipose. Residents, MI MICHIGAN; ADULTS; ADIPOSE TISSUE; BILE; BLOOD SERUM; MILK; PLACENTA; COMPARATIVE EVALUATIONS; POLYBROMINATED BIPHENYLS; ACCIDENTAL POISONING; BIOACCUMULATION; FARMS; FOOD CONTAMINATION; LACTATION; OCCUPATIONAL HAZARDS; POPULATION EXPOSURE; PREGNANCY	Hyster, J.T. Humphrey, H.E.B. Kimbrough, R.D. 1983 Archives of Environmental Health 38(1):47-53

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Polybrominated biphenyls (No postings in CHEMLINE).

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8064 Milk						Review. Breast milk contamination by chlorinated hydrocarbon insecticides and industrial pollutants, U.S. and Canada. CALIFORNIA; CANADA; DISTRICT OF COLUMBIA; MICHIGAN; MISSISSIPPI; TENNESSEE; TEXAS; UNITED STATES; AGE; INFANTS; RACIAL STUDIES; MILK; REVIEW; ALDRIN; DDE; DDT; DIELDRIN; CHLORINATED HYDROCARBONS; HEPTACHLOR EPOXIDE; HEPTACHLOROCYCLOHEXANE; HEXACHLOROBENZENE; INSECTICIDES; LINDANE; OXYCHLORDANE; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; DIETS; FARMS; FOOD CONTAMINATION; FOODS; LACTATION; METABOLITES; RURAL AREAS; SMOKING; URBAN AREAS	Calabrese, E.J. 1982 Journal of the American College of Toxicology 1(3):91-98
8065 Placenta			61	<1-370 ug/kg	<1 ug/kg Median	Significant correlation with maternal serum levels Parturient women, MI MICHIGAN; ADULTS; ADIPOSE TISSUE; BILE; BLOOD SERUM MILK; PLACENTA; COMPARATIVE EVALUATIONS; POLYBROMINATED BIPHENYLS; ACCIDENTAL POISONING; BIOACCUMULATION; FARMS; FOOD CONTAMINATION; LACTATION; OCCUPATIONAL HAZARDS; POPULATION EXPOSURE; PREGNANCY	Hyster, J.T. Humphrey, H.E.B. Kimbrough, R.D. 1983 Archives of Environmental Health 38(1):47-53

Potassium
7440-09-7
K
Atw 39.098, MP 63.2 C, BP 765.5 C, VP 100 mm Hg at 590 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0066 Blood, plasma	Ingestion	Flame photometry	16	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 5.0 +or- 0.4 mmol b) 4.6 +or- 0.1 mmol c) 4.7 +or- 0.2 mmol d) 4.3 +or- 0.3 mmol e) 5.3 +or- 0.4 mmol f) 5.3 +or- 0.4 mmo g) 5.0 +or- 0.2 mmol h) 4.8 +or- 0.2 mmol S.E.	a) Infant fed mothers' milk, start of study, 7 cases b) At 1 wk, 7 cases c) At 2 wk, 7 cases d) At 4 wk, 5 cases e) Infants fed formula, start of study, 5 cases f) At 1 wk, 7 cases g) At 2 wk, 6 cases h) At 4 wk (+ supplements NaHCO3, Ca-lactate), 5 cases Levels significantly higher in formula fed infants (p<0.05). Mild hyperkalemia (plasma K >5.5 mmol/l) observed in formula fed infants at 2nd wk only. Premature infants, birth wt <1.3 kg, mean gestational age 28 wk, Canada PREMATURE INFANTS; CANADA; NUTRITIONAL DEFICIENCIES; BLOOD PLASMA; MILK; COMPARATIVE EVALUATIONS; CALCIUM; MAGNESIUM; MINERALS; PHOSPHORUS; POTASSIUM; SODIUM; FOODS; LACTATION	Atkinson, S.A. Radde, I.C. Anderson, G.H. 1983 Journal of Pediatrics 102(1):99-106
0067 Bone		AAS	35	a) 344-610 ppm b) 161-531 ppm c) 504-666 ppm d) 144-455 ppm e) 151-711 ppm f) 144-597 ppm	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) Total femur-rib, Middle Woodland Gibson site b) Total femur-rib, Late Woodland Ledders site c) Female femur-rib, Middle Woodland Gibson site d) Female femur-rib, Late Woodland Ledders site e) Male femur-rib, Middle Woodland Gibson site f) Male femur-rib, Late Woodland Ledders site Range of means Skeletal remains LEAD; MAGNESIUM; MANGANESE; POTASSIUM; SODIUM; STRONTIUM; ZINC; ALUMINUM; CALCIUM; IRON; ILLINOIS; CADAVERS; BONES	Lambert, J.B. Vlasak, S.M. Thometz, A.C. Buikstra, J.B. 1982 American Journal of Physical Anthropology 59:289-294
0068 Hair		NA	1	Not applicable	750 +or- 100 ppm	8 cm length, from distal end, obtained from Napoleon Bonaparte in 1821 CASE HISTORIES; HAIR; ANTIMONY; ARSENIC; BROMINE; GOLD; POTASSIUM; SODIUM	Lewin, P.K. Hancock, R.G.V. Voynovich, P. 1982 Nature 299:627-628

(NEXT PAGE)

Potassium
7440-09-7
K
AtW 39.098, MP 63.2 C, BP 765.5 C, VP 100 mm Hg at 590 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0069 Kidney		ICP-AES	a) 42 b) 39	a) 787-2420 mg/kg b) 1680-2880 mg/kg Wet wt	a) 1510 mg/kg b) 1790 mg/kg Wet wt Medians	a) Cortex b) Medulla Autopsies within 48 hr Normal adults, Great Lakes region, Ontario, Canada CANADA; ADULTS; AUTOPSIES; KIDNEYS; LIVER; MEASUREMENT METHODS; CADMIUM; CALCIUM; COPPER; IRON; MAGNESIUM; MANGANESE; PHOSPHORUS; POTASSIUM; SODIUM; ZINC	Subramanian, K.S. Meranger, J.C. 1982 Science of the Total Environment 24:147-157
0070 Liver		ICP-AES	44	1020-2925 mg/kg wt wt	2[illegible] mg/kg wet wt Median	Autopsies within 48 hr Normal adults, Great Lakes region, Ontario, Canada CANADA; ADULTS; AUTOPSIES; KIDNEYS; LIVER; MEASUREMENT METHODS; CADMIUM; CALCIUM; COPPER; IRON; MAGNESIUM; MANGANESE; PHOSPHORUS; POTASSIUM; SODIUM; ZINC	Subramanian, K.S. Meranger, J.C. 1982 Science of the Total Environment 24:147-157
0071 Milk		Flame photometry	7	a) Not given b) Not given c) Not given	a) 17.8 +or- 0.50 mmol b) 16.0 +or- 0.50 mmol c) 14.7 +or- 0.80 mmol S.E.	a) 6-8 days postpartum b) 13-15 days postpartum c) 26-28 days postpartum Mothers of premature infants. Infant birth wt <1.3 kg, mean gestational age 28 wk, Canada PREMATURE INFANTS; CANADA; NUTRITIONAL DEFICIENCIES; BLOOD PLASMA; MILK; COMPARATIVE EVALUATIONS; CALCIUM; MAGNESIUM; MINERALS; PHOSPHORUS; POTASSIUM; SODIUM; FOODS; LACTATION	Atkinson, S.A. Radde, I.C. Anderson, G.H. 1983 Journal of Pediatrics 102(1):99-106
0072 Sweat						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).

Propane, 1,1'-oxybis (2,3,3,3-tetrachloro)-
127-90-2
C6-H6-Cl8-O
MW 377.72

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8073 Milk		GC-EC GC/MS	22	a) <0.2-3.8 ppb b) Not given c) <0.2-0.9 ppb d) Not given	a) 1.5 +or- 1.2 ppb b) 32 +or- 27 ppb c) 0.5 +or- 0.5 ppb d) 16 +or- 8 ppb	a) Whole milk, 1979, 12 cases (3 below detection limit 0.2 ppb) b) Fat milk basis, same samples c) Whole milk, 1980, 10 cases (4 below detection limit 0.2 ppb) d) Fat milk basis, same samples Tokyo metropolitan area residents, Sept-Nov 1979 and 1980, Japan JAPAN; ADULTS; MILK; MEASUREMENT METHODS; DDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; INSECTICIDES; HOMACHLOR; OXYCHLORDANE; PESTICIDES; LACTATION; PESTICIDE RESIDUES	Hiyazaki, T. 1982 Bulletin of Environmental Contamination and Toxicology 29:566-569

Radium, isotope of mass 226
13982-63-3
Ra
RW 226, RP 700 C, RP 1737 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8074 Adipose	Ingestion		1	Not applicable	1.1X10(E-5) uCi/kg	19,300 days after exposure at age 15-16 yr. Autopsy data. Kidney fat Former Ra dial painter RETROPERITONEAL GLAND; RADIUM; AUTOPSIES; CARCINOMAS; DISEASES; MELANOMAS; NEOPLASMS; ADIPOSE TISSUE; ADRENAL GLANDS; AORTA; BLADDER; BODY; BONE MARROW; BONES; BRAIN; EYE; HEART; INTESTINES; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SKIN; SPLEEN; STOMACH; THYROID GLANDS; UTERUS; DRUG THERAPY; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; PAINTS; RADIOISOTOPES; RADIONUCLIDES	Schlenker, R.A. Keane, A.T. Holtzman, R.B. 1982 Health Physics 42(5):671-693

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Radium, isotope of mass 226
13982-63-3
Ra
NW 226, NP 700 C, BP 1737 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8075 Adrenal gland	Injection Ingestion		a) 1 b) 1	a) Not applicable b) Not applicable	a) 3.6X10(E-5) uCi/kg b) 2.1X10(E-2) uCi/kg	a) 17,000 days after exposure to unknown amount while employed as Ra dial painter at age 18-21 yr b) Suprarenal capsule, 106 days after single IV injection of 1000 uCi Autopsy data RETROPERITONEAL GLAND; RADIUM; AUTOPSIES; CARCINOMAS; DISEASES; MELANOMAS; NEOPLASMS; ADIPOSE TISSUE; ADRENAL GLANDS; AORTA; BLADDER; BONY; BONE MARROW; BONES; BRAIN; EYE; HEART; INTESTINES; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SKIN; SPLEEN; STOMACH; THYROID GLANDS; UTERUS; DRUG THERAPY; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; PAINTS; RADIOISOTOPES; RADIONUCLIDES	Schleuker, R.A. Keane, A.T. Holtzman, R.B. 1982 Health Physics 42(5):671-683
8076 Aorta	Injection Ingestion		a) 1 b) 1 c) 1	a) Not applicable b) Not applicable c) Not applicable	a) 1.6X10(E-1) uCi/kg b) 4.3X10(E-4) uCi/kg c) 8.9X10(E-5) uCi/kg	a) 106 days after single IV injection of 1,000 uCi b) 17,000 days after exposure as Ra dial painter at age 18-21 yr c) 17,400 days after exposure as Ra dial painter at age 24-25 yr Autopsy data. Doses in b), c) unknown. RETROPERITONEAL GLAND; RADIUM; AUTOPSIES; CARCINOMAS; DISEASES; MELANOMAS; NEOPLASMS; ADIPOSE TISSUE; ADRENAL GLANDS; AORTA; BLADDER; BONY; BONE MARROW; BONES; BRAIN; EYE; HEART; INTESTINES; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SKIN; SPLEEN; STOMACH; THYROID GLANDS; UTERUS; DRUG THERAPY; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; PAINTS; RADIOISOTOPES; RADIONUCLIDES	Schleuker, R.A. Keane, A.T. Holtzman, R.B. 1982 Health Physics 42(5):671-683
8077 Bladder	Ingestion		1	Not applicable	2.9X10(E-6) uCi/kg	Autopsy, 17,000 days after exposure to unknown amount while employed as Ra dial painter at age 18-21 yr RETROPERITONEAL GLAND; RADIUM; AUTOPSIES; CARCINOMAS; DISEASES; MELANOMAS; NEOPLASMS; ADIPOSE TISSUE; ADRENAL GLANDS; AORTA; BLADDER; BONY; BONE MARROW; BONES; BRAIN; EYE; HEART; INTESTINES; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SKIN; SPLEEN; STOMACH; THYROID GLANDS; UTERUS; DRUG THERAPY; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; PAINTS; RADIOISOTOPES; RADIONUCLIDES	Schleuker, R.A. Keane, A.T. Holtzman, R.B. 1982 Health Physics 42(5):671-683

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Radium, isotope of mass 226
15802-63-3
Ra
RN 226, RP 708 C, RP 1737 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8070 Bone	Injection		a) 1 b) 1 c) 1 d) 1 e) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 5.41 uCi b) 0.323 uCi c) 0.399 uCi d) 1.39 uCi e) 0.884 uCi	a) 8 days after 50 uCi, 10.8% of dose b) 36 days after 10 uCi, 3.2% of dose c) 127 days after 25 uCi, 1.6% of dose d) 199 days after 50 uCi, 2.8% of dose e) 467 days after 35 uCi, 2.3% of dose Exhumed remains of 42-75 yr olds given Ra therapy RETROPERITONEAL GLAND; RADIUM; AUTOPSIES; CARCINOMAS; DISEASES; MELANOMAS; NEOPLASMS; ADIPOSE TISSUE; ADRENAL GLANDS; AORTA; BLADDER; BODY; BONE MARROW; BONES; BRAIN; EYE; HEART; INTESTINES; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SKIN; SPLEEN; STOMACH; THYROID GLANDS; UTERUS; DRUG THERAPY; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; PAINTS; RADIOISOTOPES; RADIONUCLIDES	Schlenker, R.A. Keane, A.T. Holtzman, R.B. 1982 Health Physics 42(5):671-693
8070 Bone marrow	Injection		1	Not applicable	2.09 uCi/kg	Autopsy, 186 days after single IV injection of 1,000 uCi RETROPERITONEAL GLAND; RADIUM; AUTOPSIES; CARCINOMAS; DISEASES; MELANOMAS; NEOPLASMS; ADIPOSE TISSUE; ADRENAL GLANDS; AORTA; BLADDER; BODY; BONE MARROW; BONES; BRAIN; EYE; HEART; INTESTINES; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SKIN; SPLEEN; STOMACH; THYROID GLANDS; UTERUS; DRUG THERAPY; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; PAINTS; RADIOISOTOPES; RADIONUCLIDES	Schlenker, R.A. Keane, A.T. Holtzman, R.B. 1982 Health Physics 42(5):671-693

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Radium, isotope of mass 226
13982-63-3
Ra
MW 226, MP 700 C, BP 1737 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8089 Brain	Ingestion		a) 1 b) 1 c) 1 d) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 4.5X10(E-2) uCi/kg b) 1.5X10(E-3) uCi/kg c) 2.6X10(E-5) uCi/kg d) 1.04X10(E-4) uCi/kg	a) 230-1,800 days after exposure as Ra dial painter at age 20-24 yr b) 4,200 days after exposure as Ra dial painter at age 17-18 yr c) 17,000 days after exposure as Ra dial painter at age 18-21 yr d) 17,700 days after ingestion of Ra nostrum at age 43-46 yr Autopsy data, a) 5 yr postmortem. Dosse unknown RETROPERITONEAL GLAND; RADIUM; AUTOPSIES; CARCINOMAS; DISEASES; MELANOMAS; NEOPLASMS; ADIPOSE TISSUE; ADRENAL GLANDS; AORTA; BLADDER; BODY; BONE MARROW; BONES; BRAIN; EYE; HEART; INTESTINES; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SKIN; SPLEEN; STOMACH; THYROID GLANDS; UTERUS; DOSE THERAPY; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; PAINTS; RADIOISOTOPES; RADIONUCLIDES	Schlenker, R.A. Keane, A.T. Holtzman, R.B. 1982 Health Physics 42(5):671-693
8081 Eye	Ingestion		a) 1 b) 1	a) Not applicable b) Not applicable	a) 8.76X10(E-4) uCi/kg b) 3.05X10(E-4) uCi/kg	a) 17,700 days after exposure at age 43-46 yr b) 10,500 days after exposure at age 25 yr Unknown dose of Ra nostrums. Autopsy data RETROPERITONEAL GLAND; RADIUM; AUTOPSIES; CARCINOMAS; DISEASES; MELANOMAS; NEOPLASMS; ADIPOSE TISSUE; ADRENAL GLANDS; AORTA; BLADDER; BODY; BONE MARROW; BONES; BRAIN; EYE; HEART; INTESTINES; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SKIN; SPLEEN; STOMACH; THYROID GLANDS; UTERUS; DOSE THERAPY; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; PAINTS; RADIOISOTOPES; RADIONUCLIDES	Schlenker, R.A. Keane, A.T. Holtzman, R.B. 1982 Health Physics 42(5):671-693

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Radium, isotope of mass 226
13982-63-3
Ra
RN 226, MF 700 C, SF 1737 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8682 Heart	Injection Ingestion		a) 1 b) 1 c) 1 d) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 1.01X10(E-2) uCi/kg b) 7.2X10(E-3) uCi/kg c) 1.1X10(E-5) uCi/kg d) 2.9X10(E-6) uCi/kg	a) 106 days after single IV injection of 1,000 uCi b) 550-1,640 days after ingesting Ra nostrum at age 47-50 yr c) 17,000 days after exposure as Ra dial painter at age 18-21 yr d) 17,600 days after exposure as Ra dial painter at age 24-25 yr Autopsy data. Doses in b)-d) unknown. RETROPERITONEAL GLAND; RADIUM; AUTOPSIES; CARCINOMAS; DISEASES; MELANOMAS; NEOPLASMS; ADIPOSE TISSUE; ADRENAL GLANDS; AORTA; BLADDER; BODY; BONE MARROW; BONES; BRAIN; EYE; HEART; INTESTINES; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SKIN; SPLEEN; STOMACH; THYROID GLANDS; UTERUS; DRUG THERAPY; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; PAINTS; RADIOISOTOPES; RADIONUCLIDES	Schlenker, R.A. Keane, A.T. Holtzman, R.B. 1982 Health Physics 42(5):671-693
8683 Intestine	Injection Ingestion		1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 2.8X10(E-6) uCi/kg b) 1.0X10(E-5) uCi/kg c) 1.8X10(E-5) uCi/kg d) 3.95X10(E-2) uCi/kg	a) 17,000 days after exposure while employed as Ra dial painter at age 18-21 yr b) Duodenum of subject in a) c) Rector sigmoid of subject in a) d) 106 days after single IV injection of 1,000 uCi Autopsy data RETROPERITONEAL GLAND; RADIUM; AUTOPSIES; CARCINOMAS; DISEASES; MELANOMAS; NEOPLASMS; ADIPOSE TISSUE; ADRENAL GLANDS; AORTA; BLADDER; BODY; BONE MARROW; BONES; BRAIN; EYE; HEART; INTESTINES; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SKIN; SPLEEN; STOMACH; THYROID GLANDS; UTERUS; DRUG THERAPY; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; PAINTS; RADIOISOTOPES; RADIONUCLIDES	Schlenker, R.A. Keane, A.T. Holtzman, R.B. 1982 Health Physics 42(5):671-693

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Radium, isotope of mass 226
13982-63-3
Ra
RN 226, RP 700 C, RP 1737 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8884 Kidney	Injection Ingestion		a) 1 b) 1 c) 1 d) 1 e) 1 f) 1 g) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable g) Not applicable	a) 6.8X10(E-3) uCi/kg b) 2.9X10(E-2) uCi/kg c) 6.8X10(E-5) uCi/kg d) 2.4X10(E-6) uCi/kg e) 1.1X10(E-5) uCi/kg f) 6.8X10(E-6) uCi/kg g) 8.7X10(E-6) uCi/kg	a) 106 days after single IV injection of 1,000 uCi b) 550-1,640 days after ingesting Ra nostrum at age 47-50 yr c) 16,700 days after exposure as Ra dial painter at age 17-18 yr d) 15,000 days after exposure as Ra dial painter at age 28-32 yr e) 17,000 days after exposure as Ra dial painter at age 18-21 yr f) 17,400 days after exposure as Ra dial painter at age 24-25 yr g) 19,200 days after exposure as Ra dial painter at age 15-16 yr Autopsy data. Doses in b)-g) unknown. RETROPERITONEAL GLAND; RADIUM; AUTOPSIES; CARCINOMAS; DISEASES; MELANOMAS; NEOPLASMS; ADIPOSE TISSUE; ADRENAL GLANDS; AORTA; BLADDER; BONE; BONE MARROW; BONES; BRAIN; EYE; HEART; INTESTINES; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SKIN; SPLEEN; STOMACH; THYROID GLANDS; UTERUS; DRUG THERAPY; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; PAINTS; RADIOISOTOPES; RADIONUCLIDES	Schlenker, R.A. Keane, A.T. Holtzman, R.B. 1982 Health Physics 42(5):671-683

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Radium, isotope of mass 226
13982-63-3
Ra
NM 226, NP 700 C, NP 1737 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8085 Liver	Injection Ingestion		a) 1 b) 1 c) 1 d) 1 e) 1 f) 1 g) 1 h) 1 i) 1 j) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable g) Not applicable h) Not applicable i) Not applicable j) Not applicable	a) 1.29 uCi/kg b) 5.5X10(E-2) uCi/kg c) 9.6X10(E-3) uCi/kg d) 9.0X10(E-4) uCi/kg e) 6.1X10(E-6) uCi/kg f) 1.59X10(E-4) uCi/kg g) 1.7X10(E-6) uCi/kg h) 1.0X10(E-6) uCi/kg i) 4.7X10(E-6) uCi/kg j) 2.6X10(E-6) uCi/kg	a) 186 days after single IV injection of 1,000 uCi b) 230-1,800 days after exposure as Ra dial painter at age 20-24 yr c) 550-1,640 days after ingesting Ra nostrum at age 47-50 yr d) 730-3,070 days after exposure as Ra dial painter at age 18-24 yr e) 10,300 days after exposure as Ra dial painter at age 30 yr f) 14,700 days after exposure as Ra dial painter at age 17-18 yr g) 15,150 days after exposure as Ra dial painter at age 16-17 yr h) 17,000 days after exposure as Ra dial painter at age 18-21 yr i) 17,700 days after ingesting Ra nostrum at age 43-46 yr j) 19,300 days after exposure as Ra dial painter at age 15-16 yr Autopsy data, b) 5 yr postmortem. Doses in b)-j) unknown. RETROPERITONEAL GLAND; RADIUM; AUTOPSIES; CARCINOMAS; DISEASES; MELANOMAS; NEOPLASMS; ADIPOSE TISSUE; ADRENAL GLANDS; AORTA; BLADDER; BODY; BONE MARROW; BONES; BRAIN; EYE; HEART; INTESTINES; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SKIN; SPLEEN; STOMACH; THYROID GLANDS; UTERUS; DRUG THERAPY; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; PAINTS; RADIOISOTOPES; RADIONUCLIDES	Schleaker, R.A. Keane, A.T. Holtzman, R.B. 1982 Health Physics 42(5):671-693

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Radium, isotope of mass 226
11902-63-3
Ra
MW 226, MP 700 C, BP 1737 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0006 Lung	Injection Ingestion		a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) 3.42X10(E-1) uCi/kg b) 2.5X10(E-1) uCi/kg c) 6.6X10(E-3) uCi/kg d) 1.9X10(E-4) uCi/kg e) 8.0X10(E-7) uCi/kg f) 3.6X10(E-5) uCi/kg	a) 186 days after single IV injection of 1,000 uCi b) 230-1,000 days after exposure as Ra dial painter at age 20-24 yr c) 536-1,640 days after ingesting Ra nostrum at age 47-56 yr d) 6,200 days after exposure as Ra dial painter at age 17-18 yr e) 15,150 days after exposure as Ra dial painter at age 16-17 yr f) 17,000 days after exposure as Ra dial painter at age 18-21 yr Autopsy data, b) 5 yr postmortem. Doses in b)-f) unknown. RETROPERITONEAL GLAND; RADIUM; AUTOPSIES; CARCINOMAS; DISEASES; MELANOMAS; NEOPLASMS; ADIPOSE TISSUE; ADRENAL GLANDS; AGENS; BLADDER; BODY; BONE MARROW; BONES; BRAIN; EYE; HEART; INTESTINES; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SKIN; SPLEEN; STOMACH; THYROID GLANDS; UTERUS; RADIO THERAPY; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; PAINTS; RADIOISOTOPES; RADIONUCLIDES	Schleaker, R.A. Keane, A.T. Boltzman, R.B. 1982 Health Physics 42(5):671-683
0007 Muscle	Ingestion		a) 1 b) 1 c) 1	a) Not applicable b) Not applicable c) Not applicable	a) 4.7X10(E-6) uCi/kg b) 1.76X10(E-5) uCi/kg c) 5.1X10(E-6) uCi/kg	a) 15,000 days after exposure at age 20-32 yr b) 17,300 days after exposure at age 21-32 yr c) 19,300 days after exposure at age 15-16 yr Autopsy data. Doses unknown Former Ra dial painters RETROPERITONEAL GLAND; RADIUM; AUTOPSIES; CARCINOMAS; DISEASES; MELANOMAS; NEOPLASMS; ADIPOSE TISSUE; ADRENAL GLANDS; AGENS; BLADDER; BODY; BONE MARROW; BONES; BRAIN; EYE; HEART; INTESTINES; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SKIN; SPLEEN; STOMACH; THYROID GLANDS; UTERUS; RADIO THERAPY; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; PAINTS; RADIOISOTOPES; RADIONUCLIDES	Schleaker, R.A. Keane, A.T. Boltzman, R.B. 1982 Health Physics 42(5):671-683

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Radium, isotope of mass 226
13982-63-3
Ra
CAS 226, NP 700 C, BP 1737 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0088 Pancreas	Injection Ingestion		a) 1 b) 1 c) 1	a) Not applicable b) Not applicable c) Not applicable	a) 0.29X10(E-2) uCi/kg b) 1.7X10(E-6) uCi/kg c) 1.5X10(E-5) uCi/kg	a) 106 days after single IV injection of 1,000 uCi b) 17,000 days after exposure as Ra dial painter at age 18-21 yr c) 17,700 days after ingesting Ra nostrum at age 43-46 yr Autopsy data. Doses in b), c) unknown. RETROPERITONEAL GLAND; RADIUM; AUTOPSIES; CARCINOMAS; DISEASES; MELANOMAS; NEOPLASMS; ADIPOSE TISSUE; ADRENAL GLANDS; AORTA; BLADDER; BODY; BONE MARROW; BONES; BRAIN; EYE; HEART; INTESTINES; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SKIN; SPLEEN; STOMACH; THYROID GLANDS; UTERUS; DRUG THERAPY; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; PAINTS; RADIOISOTOPES; RADIONUCLIDES	Schlenker, R.A. Keane, A.T. Holtzman, R.B. 1982 Health Physics 42(5):671-693
0089 Retroperi toneal gland	Injection		1	Not applicable	5.3X10(E-2) uCi/kg	Autopsy, 106 days after single IV injection of 1,000 uCi RETROPERITONEAL GLAND; RADIUM; AUTOPSIES; CARCINOMAS; DISEASES; MELANOMAS; NEOPLASMS; ADIPOSE TISSUE; ADRENAL GLANDS; AORTA; BLADDER; BODY; BONE MARROW; BONES; BRAIN; EYE; HEART; INTESTINES; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SKIN; SPLEEN; STOMACH; THYROID GLANDS; UTERUS; DRUG THERAPY; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; PAINTS; RADIOISOTOPES; RADIONUCLIDES	Schlenker, R.A. Keane, A.T. Holtzman, R.B. 1982 Health Physics 42(5):671-693
0090 Skin	Injection		1	a) Not applicable b) Not applicable c) Not applicable	a) 1.11X10(E-2) uCi/kg b) 1.62X10(E-2) uCi/kg c) 6.58X10(E-3) uCi/kg	a) Skin b) Melanoma c) Subcutaneous tissue Biopsy, 5 days after 19.5 uCi, IV 61 yr old RETROPERITONEAL GLAND; RADIUM; AUTOPSIES; CARCINOMAS; DISEASES; MELANOMAS; NEOPLASMS; ADIPOSE TISSUE; ADRENAL GLANDS; AORTA; BLADDER; BODY; BONE MARROW; BONES; BRAIN; EYE; HEART; INTESTINES; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SKIN; SPLEEN; STOMACH; THYROID GLANDS; UTERUS; DRUG THERAPY; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; PAINTS; RADIOISOTOPES; RADIONUCLIDES	Schlenker, R.A. Keane, A.T. Holtzman, R.B. 1982 Health Physics 42(5):671-693

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Radium, isotope of mass 226
13982-63-3
Ra
MW 226, MP 700 C, BP 1737 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8091 Soft tissue	Injection		a) 1 b) 1	a) Not applicable b) Not applicable	a) 5X10(E-6) uCi/kg b) 2X10(E-6) uCi/kg	a) 161 days after 1.5 uCi, IV b) 436 days after 10.5 uCi, IV Autopsy data 86 and 41 yr old RETROPERITONEAL GLAND; RADIUM; AUTOPSIES; CARCINOMAS; DISEASES; MELANOMAS; NEOPLASMS; ADIPOSE TISSUE; ADRENAL GLANDS; AORTA; BLADDER; BODY; BONE MARROW; BONES; BRAIN; EYE; HEART; INTESTINES; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SKIN; SPLEEN; STOMACH; THYROID GLANDS; UTERUS; DRUG THERAPY; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; PAINTS; RADIOISOTOPES; RADIONUCLIDES	Schleuker, R.A. Keane, A.T. Holtsman, R.B. 1982 Health Physics 42(5):671-693
8092 Spleen	Injection Ingestion		a) 1 b) 1 c) 1 d) 1 e) 1 f) 1 g) 1 h) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable g) Not applicable h) Not applicable	a) 1.66X10(E-1) uCi/kg b) 3.6X10(E-1) uCi/kg c) 7.6X10(E-3) uCi/kg d) 8.7X10(E-4) uCi/kg e) 3.0X10(E-3) uCi/kg f) 9.7X10(E-4) uCi/kg g) 4.4X10(E-3) uCi/kg h) 9.4X10(E-4) uCi/kg	a) 106 days after single IV injection of 1,000 uCi b) 230-1,000 days after exposure as Ra dial painter at age 20-24 yr, 5 yr postmortem c) 550-1,840 days after ingesting Ra nostrum at age 47-50 yr d) 4,200 days after exposure as Ra dial painter at age 17-18 yr e) 14,300 days after exposure as Ra dial painter at age 30 yr f) 14,700 days after exposure as Ra dial painter at age 17-18 yr g) 17,000 days after exposure as Ra dial painter at age 18-21 yr h) 17,700 days after ingestion of Ra nostrum at age 43-46 yr Autopsy data. Doses in b)-h) unknown. RETROPERITONEAL GLAND; RADIUM; AUTOPSIES; CARCINOMAS; DISEASES; MELANOMAS; NEOPLASMS; ADIPOSE TISSUE; ADRENAL GLANDS; AORTA; BLADDER; BODY; BONE MARROW; BONES; BRAIN; EYE; HEART; INTESTINES; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SKIN; SPLEEN; STOMACH; THYROID GLANDS; UTERUS; DRUG THERAPY; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; PAINTS; RADIOISOTOPES; RADIONUCLIDES	Schleuker, R.A. Keane, A.T. Holtsman, R.B. 1982 Health Physics 42(5):671-693

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Radium, isotope of mass 226
13982-63-3
Ra
RW 226, RP 700 C, RP 1737 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8093 Stomach	Ingestion		1	Not applicable	6.0X10(E-6) uCi/kg	Autopsy, 17,000 days after exposure at age 18-21 yr Former Ra dial painter RETROPERITONEAL GLAND; RADIUM; AUTOPSIES; CARCINOMAS; DISEASES; MELANOMAS; NEOPLASMS; ADIPOSE TISSUE; ADRENAL GLANDS; AORTA; BLADDER; BODY; BONE MARROW; BONES; BRAIN; EYE; HEART; INTESTINES; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SKIN; SPLEEN; STOMACH; THYROID GLANDS; UTERUS; DRUG THERAPY; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; PAINTS; RADIOISOTOPES; RADIONUCLIDES	Schlenker, R.A. Keane, A.T. Holtzman, R.B. 1982 Health Physics 42(5):671-693
8094 Thyroid gland	Injection Ingestion		a) 1 b) 1 c) 1	a) Not applicable b) Not applicable c) Not applicable	a) 5.26X10(E-2) uCi/kg b) 1.1X10(E-4) uCi/kg c) 2.13X10(E-4) uCi/kg	a) 106 days after single IV injection of 1,000 uCi b) 17,000 days after exposure as Ra dial painter at age 18-21 yr c) 17,700 days after ingesting Ra nostrum at age 43-46 yr Autopsy data. Doses in b), c) unknown. RETROPERITONEAL GLAND; RADIUM; AUTOPSIES; CARCINOMAS; DISEASES; MELANOMAS; NEOPLASMS; ADIPOSE TISSUE; ADRENAL GLANDS; AORTA; BLADDER; BODY; BONE MARROW; BONES; BRAIN; EYE; HEART; INTESTINES; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SKIN; SPLEEN; STOMACH; THYROID GLANDS; UTERUS; DRUG THERAPY; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; PAINTS; RADIOISOTOPES; RADIONUCLIDES	Schlenker, R.A. Keane, A.T. Holtzman, R.B. 1982 Health Physics 42(5):671-693

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Radium, isotope of mass 226
13982-63-3
Ra
MW 226, MP 700 C, BP 1737 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8095 Uterus	Injection		1	a) Not applicable b) Not applicable c) Not applicable	a) 2.22X10(E-2) uCi/kg b) 3.6X10(E-6) uCi/kg c) 2.6X10(E-6) uCi/kg	a) Carcinoma, 106 days after single IV injection of 1,000 uCi b) 17,000 days after exposure as Ra dial painter at age 18-21 yr c) 17,000 days after exposure as Ra dial painter at age 24-25 yr Autopsy data. Doses in b), c) unknown. RETROPERITONEAL GLAND; RADIUM; AUTOPSIES; CARCINOMAS; DISEASES; MELANOMAS; NEOPLASMS; ADIPOSE TISSUE; ADRENAL GLANDS; AORTA; BLADDER; BODY; BONE MARROW; BONES; BRAIN; EYE; HEART; INTESTINES; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SKIN; SPLEEN; STOMACH; THYROID GLANDS; UTERUS; DRUG THERAPY; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; PAINTS; RADIOISOTOPES; RADIONUCLIDES	Schlenker, R.A. Keane, A.T. Holtzman, R.B. 1982 Health Physics 42(5):671-693

Rubidium
7440-17-7
Rb
AEW 85.4678, MP 39 C, BP 688 C, VP 10 mm Hg at 390 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0096 Milk	Ingestion	NA	21	a) <or= 0.3-25.8 ug/g b) 0.42-0.2 ug/g	a) 5.8 +or- 0.4 ug/g b) 0.9 +or- 0.1 ug/g	a) Weekly samples, different foods on some day. 2-3 months beginning 15 days after childbirth, Latium b) Same conditions, samples from Castrovillari Mean calculated from samples with levels above detection limit Healthy subjects, Latium and Castrovillari, Italy ITALY; ADULTS; MILK; IN VITRO ANALYSIS; LACTATION; ARSENIC; CESIUM; CHROMIUM; COBALT; IRON; MERCURY; RUBIDIUM; SCANDIUM; SELENIUM; TRACE ELEMENTS; ZINC	Clemente, G.F. Ingrao, G. Santaroni, G.P. 1982 Science of the Total Environment 24:255-265

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Rubidium
7440-17-7
Rb
AtW 85.4678, MP 39 C, BP 688 C, VP 10 mm Hg at 390 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8097 Pineal gland		NA	91	0.1x10(E-6)x44.0x10(E-6) g/g dry wt	11.2x10(E-6) g/g dry wt	Autopsies 20-24 hr after death. Mean less than means for 266 other areas of 7 brains (2p<0.001). Levels estimated from graph, constant over wide range of fresh weights, not related to age, sex or body burden. Positive correlation with Se. 2-85 yr olds males and females AUTOPSIES; PINEAL GLAND; BRAIN; COMPARATIVE EVALUATIONS; ANTIMONY; CESIUM; COBALT; IRON; RUBIDIUM; SELENIUM; ZINC	Dunnel, U. Hock, A. Kasperek, K. Feinendegen, L.E. 1982 Science of the Total Environment 24:135-146

Salicylic acid, 5-((p-(2-pyridylsulfamoyl)phenyl)azo)- (8 CI)
Benzoic acid, 2-hydroxy-5-((4-((2-pyridinylamino)sulfonyl)phenyl)azo)- (9 CI)
599-79-1
C18-H14-N4-O5-S
MW 398.39, MP 240-245 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8090 Milk						Review. General pharmacological principles associated with excretion of drugs and chemicals in human milk. PENNSYLVANIA; UNITED STATES; ADULTS; INFANTS; MILK; SALIVA; URINE; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTICOAGULANTS; ANTIPYRETICS; DIURETICS; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; CAFFEINE; NICOTINE; PESTICIDES; SODIUM; THEOPHYLLINES; ALCOHOLIC BEVERAGES; LACTATION; METABOLISM; METABOLITES; TOBACCOS	Berlin, C.H., Jr. 1981 Obstetrics and Gynecology 58(5)(supplement):17S-23S

Scandium
7440-20-2
Sc
AtW 44.9559, MP 1539 C, BP 2832 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8099 Hair						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).
8100 Milk	Ingestion	NA	21	<or= 0.01-0.77 ng/g	Not given	Weekly samples, different foods on same day. 2-3 months beginning 15 days after childbirth. Mean calculated from samples with levels above detection limit Healthy subjects, Italy ITALY; ADULTS; MILK; IN VITRO ANALYSIS; LACTATION; ANTIMONY; CESIUM; CHROMIUM; COBALT; IRON; MERCURY; RUBIDIUM; SCANDIUM; TRACE ELEMENTS; ZINC	Clemente, G.F. Ingrao, G. Santaroni, G.P. 1982 Science of the Total Environment 24:255-265

Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8101 Blood						Review of the metabolic fate of selenium in man and laboratory animals CANADA; GREECE; GUATEMALA; IOWA; NEW SEALAND; OHIO; OREGON; SOUTH DAKOTA; UNITED KINGDOM; UNITED STATES; ADULTS; AGE; CHILDREN; CARCINOMAS; RESPIRATORY DISEASES; NUTRITIONAL DEFICIENCIES; BLOOD; BLOOD PLASMA; BODY; BREATH; ERYTHROCYTES; FECES; HAIR; KIDNEYS; LIVER; LUNGS; MILK; MUSCLES; PERIBRONCHIAL NODE; NAILS; PLACENTA; SKIN; SWEAT; THYROID GLANDS; URINE; SELENIUM; TRACE ELEMENTS; DIETS; FOODS; INDUSTRIES; METABOLISM; METABOLITES; RADIOISOTOPES; RADIONUCLIDES; RATS	Bopp, B.A. Sonders, R.C. Kesterson, J.W. 1982 Drug Metabolism Reviews 13(2):271-318
8102 Blood		AAS	72	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given	a) 119 +or- 25 ug/l b) 115 +or- 28 ug/l c) 119 +or- 21 ug/l d) 119 +or- 20 ug/l e) 121 +or- 26 ug/l f) 121 +or- 24 ug/l g) 119 +or- 22 ug/l h) 119 +or- 23 ug/l i) 119 +or- 23 ug/l	a) 13 smokers, men b) 19 nonsmokers, men c) Combined groups a) and b) d) 12 smokers, women e) 28 nonsmokers, women f) Combined groups d) and e) g) Combined groups a) and d) h) Combined groups b) and e) i) Combined groups g) and h) Healthy residents of New Orleans, LA. LOUISANA; ADULTS; BLOOD; MEASUREMENT METHODS; METALS; SELENIUM	Tulley, R.T. Lehmann, H.P. 1982 Clinical Chemistry 28(7):1448-1450
8103 Blood		Fluorometry	a) 20 b) 16	a) 1.50-2.35 umol/l b) 1.56-2.27 umol/l	a) 180 umol/l b) 183 umol/l	a) Men b) Women 16-59 yr old residents of Kangaroo Island, South Australia, Feb 1979 AUSTRALIA; ADULTS; BLOOD; SELENIUM; DIETS	Judson, G.J. Thomas, D.W. Mattschess, K.M. 1982 Medical Journal of Australia 2(5):217

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Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0184 Blood, cells						Review of the metabolic fate of selenium in man and laboratory animals CANADA; GREECE; GUATEMALA; IOWA; NEW ZEALAND; OHIO; OREGON; SOUTH DAKOTA; UNITED KINGDOM; UNITED STATES; ADULTS; AGE; CHILDREN; CARCINOMAS; RESPIRATORY DISEASES; NUTRITIONAL DEFICIENCIES; BLOOD; BLOOD PLASMA; BODY; BREATH; ERYTHROCYTES; FECES; HAIR; KIDNEYS; LIVER; LUNGS; MILK; MUSCLES; PERIBRONCHIAL BODY; NAILS; PLACENTA; SKIN; SWEAT; THYROID GLANDS; URINE; SELENIUM; TRACE ELEMENTS; DIETS; FOODS; INDUSTRIES; METABOLISM; METABOLITES; RADIOISOTOPES; RADIONUCLIDES; RATS	Hopp, E.A. Sanders, R.C. Masterson, J.W. 1982 Drug Metabolism Reviews 13(2):271-319
0185 Blood, cells		AAS	21	0.113-0.457 ug/ml of packed erythrocytes	0.191 +or- 0.086 ug/ml of packed erythrocytes	Patients with alcoholic cardiomyopathy and related disorders. No apparent Se deficiency. 30-66 yr olds ADULTS; HEART DISEASES; BLOOD PLASMA; ERYTHROCYTES; SELENIUM; METALS	Sartiano, G.P. Lynch, W.E. Hopkins, C.E. Darby, T.D. 1982 New England Journal of Medicine 307(5):558
0186 Blood, cells		Fluorometry	4	0.5-1.15 ng/mg protein	Not given	Significantly correlated with levels in urine. Estimated from graph 19-37 yr olds ADULTS; ERYTHROCYTES; URINE; COMPARATIVE EVALUATIONS; MEASUREMENT METHODS; SELENIUM	Hojo, Y. 1982 Bulletin of Environmental Contamination and Toxicology 29:37-42

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Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0107 Blood, fetal						Review of the metabolic fate of selenium in man and laboratory animals CANADA; CZECH; GUATEMALA; IOWA; NEW ZEALAND; OHIO; OREGON; SOUTH DAKOTA; UNITED KINGDOM; UNITED STATES; ADULTS; AGE; CHILDREN; CARCINOMAS; RESPIRATORY DISEASES; NUTRITIONAL DEFICIENCIES; BLOOD; BLOOD PLASMA; BODY; BREATH; ERYTHROCYTES; FECES; HAIR; KIDNEYS; LIVER; LUNGS; MILK; MUSCLES; PERIBRONCHIAL NODE; NAILS; PLACENTA; SKIN; SWEAT; THYROID GLANDS; URINE; SELENIUM; TRACE ELEMENTS; DIETS; FOODS; INDUSTRIES; METABOLISM; METABOLITES; RADIOISOTOPES; RADIONUCLIDES; RATS	Hopp, B.A. Sanders, B.C. Masterson, J.W. 1982 Drug Metabolism Reviews 13(3):271-318
0108 Blood, plasma		Fluorometry	13	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given	a) 0.12 +or- 0.03 ppm b) 0.10 +or- 0.03 ppm c) 0.06 +or- 0.03 ppm d) 0.09 +or- 0.04 ppm e) 0.08 +or- 0.03 ppm f) 0.08 +or- 0.05 ppm g) 0.06 +or- 0.03 ppm h) 0.06 +or- 0.01 ppm i) 0.08 +or- 0.02 ppm S.E.	a) 2nd month b) 3rd month c) 4th month d) 5th month e) 6th month f) 7th month g) 8th month h) 9th month i) 6 wk postpartum Times in progeancy Each group with mean of 6-13 women, estimated from graph Se levels in whole blood & plasma decreased, erythrocyte and plasma glutathione peroxidase activities increased during progeancy Healthy adults, CR OREGON; ADULTS; BLOOD; BLOOD PLASMA; SELENIUM; ENZYMES; PREGNANCY; RATS	Butler, J.A. Whanger, P.D. Tripp, M.J. 1982 American Journal of Clinical Nutrition 36:15-23

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Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8109 Blood, plasma						Review of the metabolic fate of selenium in man and laboratory animals CANADA; GREECE; GUATEMALA; IOWA; NEW ZEALAND; OHIO; OREGON; SOUTH DAKOTA; UNITED KINGDOM; UNITED STATES; ADULTS; AGE; CHILDREN; CARCINOMAS; RESPIRATORY DISEASES; NUTRITIONAL DEFICIENCIES; BLOOD; BLOOD PLASMA; BODY; BREATH; ERYTHROCYTES; FECES; HAIR; KIDNEYS; LIVER; LUNGS; MILK; MUSCLES; PERIBRONCHIAL NODE; NAILS; PLACENTA; SKIN; SWEAT; THYROID GLANDS; URINE; SELENIUM; TRACE ELEMENTS; DIETS; FOODS; INDUSTRIES; METABOLISM; METABOLITES; RADIOISOTOPES; RADIONUCLIDES; RATS	Bopp, B.A. Sonders, R.C. Kesterson, J.W. 1983 Drug Metabolism Reviews 13(2):271-318
8110 Blood, plasma		AAS	21	0.077-0.178 ug/ml	0.106 +or- 0.029 ug/ml	Patients with alcoholic cardiomyopathy and related disorders. No apparent Se deficiency. 30-86 yr olds ADULTS; HEART DISEASES; BLOOD PLASMA; ERYTHROCYTES; SELENIUM; METALS	Sartiano, G.P. Lynch, W.E. Hopkins, C.R. Derby, T.D. 1983 New England Journal of Medicine 307(9):550
8111 Blood, serum		Fluorometry	59	a) Not given b) Not given c) Not given d) Not given	a) 0.11 +or- 0.009 ug/ml b) 0.10 +or- 0.008 ug/ml c) 0.12 +or- 0.006 ug/ml d) 0.14 +or- 0.006 ug/ml S.E.	a) Cancer patients b) Cardiac patients c) Patients with other pathological conditions d) 5 normal subjects Group b) significantly lower than d) Hospital patient SC SOUTH CAROLINA; ADOLESCENTS; ADULTS; AGE; CHILDREN; RACIAL STUDIES; SEX; CARCINOMAS; CARDIOVASCULAR DISEASES; BLOOD SERUM; HAIR; SELENIUM; BIOACCUMULATION; DIETS	Thimaya, S. Ganapathy, S.N. 1982 Science of the Total Environment 24:41-49
8112 Blood, serum		Fluorometry	42	65-135 ng/ml	95.4 +or- 14.4 ng/ml	Range estimated from graph Healthy 5-10 yr olds, with familial short stature and constitutional growth delay, Long Island, NY NEW YORK; CHILDREN; BLOOD SERUM; HAIR; URINE; MEASUREMENT METHODS; SELENIUM	Chen, S.Y. Collipp, P.J. Bondi, L.H. Isenschmid, D.S. Varella, R.J. San Roman, G.A. Yeh, J.K. 1982 Annals of Nutrition and Metabolism 26:186-190

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Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0113 Blood, whole		Fluorometry	13	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given	a) 0.11 +or- 0.04 ppm b) 0.12 +or- 0.03 ppm c) 0.10 +or- 0.03 ppm d) 0.11 +or- 0.04 ppm e) 0.10 +or- 0.03 ppm f) 0.09 +or- 0.03 ppm g) 0.07 +or- 0.03 ppm h) 0.07 +or- 0.02 ppm i) 0.08 +or- 0.03 ppm S.E.	a) 2nd month b) 3rd month c) 4th month d) 5th month e) 6th month f) 7th month g) 8th month h) 9th month i) 6 wk postpartum Times in pregnancy. Each group with mean of 6-13 women, estimated from graph. Se levels in whole blood & plasma decreased, erythrocyte and plasma glutathione peroxidase activities increased during pregnancy Data also for blood Se to peroxidase ratio in humans and animals. Healthy adults, OR ORGCON; ADULTS; BLOOD; BLOOD PLASMA; SELENIUM; ENZYMES; PREGNANCY; RATS	Butler, J.A. Whanger, P.D. Tripp, M.J. 1982 American Journal of Clinical Nutrition 36:15-23
0114 Blood, whole	Ingestion	Fluorometry	a) 20 b) 28 c) 9 d) 7 e) 17 f) 35 g) 16	a) 0.040-0.245 ug/ml b) 0.020-0.190 ug/ml c) 0.030-0.124 ug/ml d) 0.022-0.164 ug/ml e) 0.023-0.120 ug/ml f) 0.033-0.216 ug/ml g) 0.055-0.248 ug/ml	a) 0.096 +or- 0.046 ug/ml b) 0.104 +or- 0.053 ug/ml c) 0.082 +or- 0.032 ug/ml d) 0.069 +or- 0.049 ug/ml e) 0.076 +or- 0.028 ug/ml f) 0.112 +or- 0.050 ug/ml g) 0.110 +or- 0.046 ug/ml	Seventh-day Adventist vegetarians, men b) Seventh-day Adventist vegetarians, women c) Seventh-day Adventist nonvegetarians, men d) Seventh-day Adventist nonvegetarians, women e) Nonvegetarians, men f) Nonvegetarians, women g) Women with hormone-dependent cancers No significant differences between vegetarians, nonvegetarians or cancer patients. Levels positively correlated with intake of protein, riboflavin, niacin, oleic and linoleic acids but not with 11 other nutrients. Healthy 19-83 yr olds, and 48-79 yr old women, with present or previous malignancies (in remission) of ovary, uterus, breast. Low soil-Se region, OR ORGCON; ADULTS; NEOPLASMS; NUTRITIONAL DEFICIENCIES; BLOOD; SELENIUM; DIETS; FOODS; SOILS	Shultz, T.D. Lokken, J.E. 1983 American Journal of Clinical Nutrition 37:114-118

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Selenium
7782-49-2
Se
AEM 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0115 Body						Review of the metabolic fate of selenium in man and laboratory animals CANADA; ORGANS; GUATEMALA; IOWA; NEW ZEALAND; OHIO; OREGON; SOUTH DAKOTA; UNITED KINGDOM; UNITED STATES; ADULTS; AGE; CHILDREN; CARCINOMAS; RESPIRATORY DISEASES; NUTRITIONAL DEFICIENCIES; BLOOD; BLOOD PLASMA; BODY; BREATH; ERYTHROCYTES; FECES; HAIR; KIDNEYS; LIVER; LUNGS; MILK; MUSCLES; PERIBRONCHIAL NODE; NAILS; PLACENTA; SKIN; SWEAT; THYROID GLAND; URINE; SELENIUM; TRACE ELEMENTS; DIETS; FOODS; INDUSTRIES; METABOLISM; METABOLITES; RADIOISOTOPES; RADIONUCLIDES; RATS	Rapp, B.A. Sanders, R.C. Masterson, J.W. 1982 Drug Metabolism Reviews 13(2):271-319
0116 Brain		Fluorometry	8	0.43-0.88 ug/g Dry wt	0.66 +or- 0.11 ug/g Dry wt	Autopsies 27-42 wk old fetuses, New Zealand NEW ZEALAND; ADULTS; AUTOPSIES; FETUS; INFANTS; NUTRITIONAL DEFICIENCIES; BRAIN; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; COMPARATIVE EVALUATIONS; SELENIUM	Casey, C.E. Guthrie, G.E. Friend, C.M. Robinson, M.F. 1982 Archives of Environmental Health 37(3):133-135
0117 Breath						Review of the metabolic fate of selenium in man and laboratory animals CANADA; ORGANS; GUATEMALA; IOWA; NEW ZEALAND; OHIO; OREGON; SOUTH DAKOTA; UNITED KINGDOM; UNITED STATES; ADULTS; AGE; CHILDREN; CARCINOMAS; RESPIRATORY DISEASES; NUTRITIONAL DEFICIENCIES; BLOOD; BLOOD PLASMA; BODY; BREATH; ERYTHROCYTES; FECES; HAIR; KIDNEYS; LIVER; LUNGS; MILK; MUSCLES; PERIBRONCHIAL NODE; NAILS; PLACENTA; SKIN; SWEAT; THYROID GLAND; URINE; SELENIUM; TRACE ELEMENTS; DIETS; FOODS; INDUSTRIES; METABOLISM; METABOLITES; RADIOISOTOPES; RADIONUCLIDES; RATS	Rapp, B.A. Sanders, R.C. Masterson, J.W. 1982 Drug Metabolism Reviews 13(2):271-319

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Selenium
7782-49-2
Se
AEM 70.96, BP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 620 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8118 Hair		Fluorometry	170	a) Not given b) Not given c) 0.53-0.76 ug/g d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given m) Not given n) Not given o) Not given p) Not given q) Not given	a) 0.66 +or- 0.07 ug/g b) 0.64 +or- 0.04 ug/g c) 0.76 +or- 0.04 ug/g d) 0.64 +or- 0.04 ug/g e) 0.62 +or- 0.03 ug/g f) 0.59 +or- 0.04 ug/g g) 0.62 +or- 0.04 ug/g h) 0.69 +or- 0.06 ug/g i) 0.55 +or- 0.03 ug/g j) 0.62 +or- 0.03 ug/g k) 0.64 +or- 0.02 ug/g l) 0.67 +or- 0.02 ug/g m) 0.54 +or- 0.02 ug/g n) 0.51 +or- 0.02 ug/g o) 0.69 +or- 0.03 ug/g p) 0.55 +or- 0.05 ug/g q) 0.63 +or- 0.06 ug/g S.E.	a) <6 yr old, 6 cases b) 6-10 yr olds, 12 cases c) 11-15 yr olds, 13 cases d) 16-20 yr olds, 21 cases e) 21-30 yr olds, 26 cases f) 31-40 yr olds, 9 cases g) 41-50 yr olds, 7 cases h) 51-60 yr olds, 9 cases i) 61-70 yr olds, 8 cases j) >70 yr olds, 4 cases k) Levels, both whites and non-whites, a)-j) l) Males a)-j) m) Females a)-j) n) Cancer patients o) Cardiac patients p) Patients with other pathological conditions q) 9 normal subjects Group c) significantly higher than a)-j), i) lower than a)-j), l) higher than m), o) lower than q) Healthy subjects and hospital patients with hair free of medicated shampoos, bleaches, and dyes, SC SOUTH CAROLINA; ADOLESCENTS; ADULTS; AGE; CHILDREN; RACIAL STUDIES; SEX; CARCINOMAS; CARDIOVASCULAR DISEASES; BLOOD SERUM; HAIR; SELENIUM; BIOACCUMULATION; DIETS	Shimoyo, S. Ganapathy, S.N. 1982 Science of the Total Environment 24:41-49
8119 Hair						Review of the metabolic fate of selenium in man and laboratory animals CANADA; GREECE; GUATEMALA; IOWA; NEW ZEALAND; OHIO; OREGON; SOUTH DAKOTA; UNITED KINGDOM; UNITED STATES; ADULTS; AGE; CHILDREN; CARCINOMAS; RESPIRATORY DISEASES; NUTRITIONAL DEFICIENCIES; BLOOD; BLOOD PLASMA; BODY; BREATH; ERYTHROCYTES; FECES; HAIR; KIDNEYS; LIVER; LUNGS; MILK; MUSCLES; PERIBRONCHIAL NODE; NAILS; PLACENTA; SKIN; SWEAT; THYROID GLANDS; URINE; SELENIUM; TRACE ELEMENTS; DIETS; FOODS; INDUSTRIES; METABOLISM; METABOLITES; RADIOISOTOPES; RADIONUCLIDES; RATS	Sopp, B.A. Sanders, H.C. Kesterson, J.W. 1982 Drug Metabolism Reviews 13(2):271-318

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Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8120 Hair		NS	164	a) 0.2-6.0 ppm b) 1.0-6.0 ppm c) 0.2-5.9 ppm d) 10-160 ppm e) Not applicable f) Not applicable	a) 2.0 ppm b) 2.9 ppm c) 2.7 ppm d) Not given e) 22 ppm f) 23 ppm	a) 156 cases b) 63 men from a) c) 93 women from a) d) Regular use of shampoo containing 2.5% w/v Se sulfide in the 3 mo before sampling, 5 cases e) Woman, hand exposure from shampoo 2x/wk only on her child's hair f) Man, no history of Se exposure, had alcholic cirrhosis of liver caused by alcoholism Patients seen in general medical private practice, irrespective of clinical diagnosis CASE HISTORIES; CIRRHOSIS; HAIR; SELENIUM; BIOACCUMULATION; POPULATION EXPOSURE	Davies, T.E. 1982 Lancet 2(8304):835
8121 Hair						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CARMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, E.C. 1978 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1978, (pp. 59-73).
8122 Hair		Fluorometry	52	0.5-1.5 ug/g	0.765 +or- 0.114 ug/g	Range estimated from graph Healthy 5-10 yr olds, with familial short stature and constitutional growth delay, Long Island, NY NEW YORK; CHILDREN; BLOOD SERUM; HAIR; URINE; MEASUREMENT METHODS; SELENIUM	Chan, S.Y. Collipp, P.J. Bossi, L.M. Isenschmid, D.S. Varella, R.J. San Roman, G.A. Yuh, J.K. 1983 Annals of Nutrition and Metabolism 26:186-190

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Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0123 Heart		Fluorometry	5	0.57-0.81 ug/g Dry wt	0.68 +or- 0.11 ug/g Dry wt	Autopsies 15-74 yr old residents of New Zealand NEW ZEALAND; ADULTS; AUTOPSIES; FETUS; INFANTS; NUTRITIONAL DEFICIENCIES; BRAIN; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; COMPARATIVE EVALUATIONS; SELENIUM	Casey, C.E. Guthrie, R.H. Friend, G.H. Robinson, M.F. 1982 Archives of Environmental Health 37(3):133-135
0124 Kidney						Review of the metabolic fate of selenium in man and laboratory animals CANADA; GABBCS; GUATEMALA; IOWA; NEW ZEALAND; OHIO; OREGON; SOUTH DAKOTA; UNITED KINGDOM; UNITED STATES; ADULTS; AGE; CHILDREN; CARCINOMAS; RESPIRATORY DISEASES; NUTRITIONAL DEFICIENCIES; BLOOD; BLOOD PLASMA; BODY; BREATH; ERYTHROCYTES; FECES; HAIR; KIDNEYS; LIVER; LUNGS; MILK; MUSCLES; PERIBRONCHIAL NODE; NAILS; PLACENTA; SKIN; SWEAT; THYROID GLANDS; URINE; SELENIUM; TRACE ELEMENTS; DIETS; FOODS; INDUSTRIES; METABOLISM; METABOLITES; RADIOISOTOPES; RADIONUCLIDES; RATS	Bopp, B.A. Sonders, R.C. Kesterson, J.W. 1983 Drug Metabolism Reviews 13(2):271-318
0125 Kidney		Fluorometry	a) 2 b) 33	a) 1.92-2.24 ug/g b) 0.64-6.17 ug/g Dry wt	a) 2.07 +or- 0.22 ug/g b) 3.14 +or- 1.69 ug/g Dry wt	a) 4-84 mo olds b) 15-74 yr olds Cortex. Levels higher than those in liver, skeletal muscle, brain, heart, lung. Autopsies Residents of New Zealand NEW ZEALAND; ADULTS; AUTOPSIES; FETUS; INFANTS; NUTRITIONAL DEFICIENCIES; BRAIN; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; COMPARATIVE EVALUATIONS; SELENIUM	Casey, C.E. Guthrie, R.H. Friend, G.H. Robinson, M.F. 1982 Archives of Environmental Health 37(3):133-135

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Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0126 Liver						Review of the metabolic fate of selenium in man and laboratory animals CANADA; GREECE; GUATEMALA; IOWA; NEW ZEALAND; OHIO; OREGON; SOUTH DAKOTA; UNITED KINGDOM; UNITED STATES; ADULTS; AGE; CHILDREN; CARCINOMAS; RESPIRATORY DISEASES; NUTRITIONAL DEFICIENCIES; BLOOD; BLOOD PLASMA; BODY; BRAIN; ERYTHROCYTES; FECES; HAIR; KIDNEYS; LIVER; LUNGS; NAILS; MUSCLE; PERIBRONCHIAL NODE; NAILS; PLACENTA; SKIN; SWEAT; THYROID GLAND; URINE; SELENIUM; TRACE ELEMENTS; DIETS; FOODS; INDUSTRIES; METABOLISM; METABOLITES; RADIOISOTOPES; RADIONUCLIDES; RATS	Depp, E.A. Sanders, B.C. Masterson, J.W. 1982 Drug Metabolism & Toxicology 13(3):271-310
0127 Liver		Fluorometry	a) 12 b) 6 c) 41	a) 0.67-1.84 ug/g b) 0.31-0.83 ug/g c) 0.37-1.84 ug/g Dry wt	a) 1.26 +or- 0.38 ug/g b) 0.58 +or- 0.32 ug/g c) 0.72 +or- 0.18 ug/g Dry wt	a) Fetuses, 27-42 wk old b) Infants, 0-36 mo old c) Adults, 15-76 yr old Significant difference between a) and c) (P<0.001) Fetal liver levels declined with gestational age (r=-0.886, P<0.001) Adult liver levels correlated with kidney cortex Se (p=0.886) and muscle Se (p=0.868). Autopsies Residents of New Zealand NEW ZEALAND; ADULTS; AUTOPSIES; FETUS; INFANTS; NUTRITIONAL DEFICIENCIES; BRAIN; BOARD; KIDNEYS; LIVER; LUNGS; MUSCLE; COMPARATIVE EVALUATIONS; SELENIUM	Casey, C.E. Guthrie, R.E. Friend, G.H. Robinson, M.F. 1982 Archives of Environmental Health 37(2):132-135

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Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8128 Lung						Review of the metabolic fate of selenium in man and laboratory animals CANADA; GREECE; GUATEMALA; IOWA; NEW ZEALAND; OHIO; OREGON; SOUTH DAKOTA; UNITED KINGDOM; UNITED STATES; ADULTS; AGE; CHILDREN; CARCINOMAS; RESPIRATORY DISEASES; NUTRITIONAL DEFICIENCIES; BLOOD; BLOOD PLASMA; BODY; BREATH; ERYTHROCYTES; FECES; HAIR; KIDNEYS; LIVER; LUNGS; MILK; MUSCLES; PERIBRONCHIAL NODE; NAILS; PLACENTA; SKIN; SWEAT; THYROID GLANDS; URINE; SELENIUM; TRACE ELEMENTS; DIETS; FOODS; INDUSTRIES; METABOLISM; METABOLITES; RADIOISOTOPES; RADIONUCLIDES; RATS	Bopp, B.A. Sonders, R.C. Kesterson, J.W. 1982 Drug Metabolism Reviews 13(2):271-318
8129 Lung		Fluorometry	6	0.33-0.70 ug/g Dry wt	0.45 +or- 0.13 ug/g Dry wt	Autopsies 15-74 yr old residents of New Zealand NEW ZEALAND; ADULTS; AUTOPSIES; FETUS; INFANTS; NUTRITIONAL DEFICIENCIES; BRAIN; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; COMPARATIVE EVALUATIONS; SELENIUM	Casey, C.E. Guthrie, R.E. Friend, G.H. Robinson, M.F. 1982 Archives of Environmental Health 37(3):133-135
8130 Milk						Review of the metabolic fate of selenium in man and laboratory animals CANADA; GREECE; GUATEMALA; IOWA; NEW ZEALAND; OHIO; OREGON; SOUTH DAKOTA; UNITED KINGDOM; UNITED STATES; ADULTS; AGE; CHILDREN; CARCINOMAS; RESPIRATORY DISEASES; NUTRITIONAL DEFICIENCIES; BLOOD; BLOOD PLASMA; BODY; BREATH; ERYTHROCYTES; FECES; HAIR; KIDNEYS; LIVER; LUNGS; MILK; MUSCLES; PERIBRONCHIAL NODE; NAILS; PLACENTA; SKIN; SWEAT; THYROID GLANDS; URINE; SELENIUM; TRACE ELEMENTS; DIETS; FOODS; INDUSTRIES; METABOLISM; METABOLITES; RADIOISOTOPES; RADIONUCLIDES; RATS	Bopp, B.A. Sonders, R.C. Kesterson, J.W. 1982 Drug Metabolism Reviews 13(2):271-318

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Selenium
7782-49-2
Se
AEW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8131 Milk	Ingestion	NA	21	<or= 1.0-49.6 ng/g	13.3 +or- 0.9 ng/g	Weekly samples, different foods on same day. 2-3 months beginning 15 days after childbirth. Mean calculated from samples with levels above detection limit Healthy subjects, Italy ITALY; ADULTS; MILK; IN VITRO ANALYSIS; LACTATION; ANTIMONY; CESIUM; CHROMIUM; COBALT; IRON; MERCURY; RUBIDIUM; SCANDIUM; TRACE ELEMENTS; ZINC	Clemente, G.F. Ingrao, G. Santaroni, G.P. 1982 Science of the Total Environment 24:255-265
8132 Muscle						Review of the metabolic fate of selenium in man and laboratory animals CANADA; GREECE; GUATEMALA; IOWA; NEW ZEALAND; OHIO; OREGON; SOUTH DAKOTA; UNITED KINGDOM; UNITED STATES; ADULTS; AGE; CHILDREN; CARCINOMAS; RESPIRATORY DISEASES; NUTRITIONAL DEFICIENCIES; BLOOD; BLOOD PLASMA; BODY; BREATH; ERYTHROCYTES; FECES; HAIR; KIDNEYS; LIVER; LUNGS; MILK; MUSCLES; PERIBRONCHIAL NODE; NAILS; PLACENTA; SKIN; SWEAT; THYROID GLANDS; URINE; SELENITES; TRACE ELEMENTS; DIETS; FOODS; INDUSTRIES; METABOLISM; METABOLITES; RADIOISOTOPES; RADIONUCLIDES; RATS	Bopp, B.A. Sanders, E.C. Kesterson, J.W. 1982 Drug Metabolism Reviews 13(2):271-318
8133 Muscle		Fluorometry	22	0.11-0.43 ug/g Dry wt	0.29 +or- 0.08 ug/g Dry wt	Skeletal muscle. Levels lower than those in liver, kidney cortex, brain, heart, lung. Autopsies 15-74 yr old residents of New Zealand NEW ZEALAND; ADULTS; AUTOPSIES; FETUS; INFANTS; NUTRITIONAL DEFICIENCIES; BRAIN; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; COMPARATIVE EVALUATIONS; SELENIUM	Casey, C.E. Guthrie, R.D. Friend, G.H. Robinson, M.F. 1982 Archives of Environmental Health 37(3):133-135

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Selenium
7782-49-2
Se
AEW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8134 Hail						Review of the metabolic fate of selenium in man and laboratory animals CANADA; GREECE; GUATEMALA; IOWA; NEW ZEALAND; OHIO; OREGON; SOUTH DAKOTA; UNITED KINGDOM; UNITED STATES; ADULTS; AGE; CHILDREN; CARCINOMAS; RESPIRATORY DISEASES; NUTRITIONAL DEFICIENCIES; BLOOD; BLOOD PLASMA; BODY; BREATH; ERYTHROCYTES; FECES; HAIR; KIDNEYS; LIVER; LUNGS; MILK; MUSCLES; PERIBRONCHIAL NODE; NAILS; PLACENTA; SKIN; SWEAT; THYROID GLANDS; URINE; SELENIUM; TRACE ELEMENTS; DIETS; FOODS; INDUSTRIES; METABOLISM; METABOLITES; RADIOISOTOPES; RADIONUCLIDES; RATS	Sopp, H.A. Sanders, H.C. Masterson, J.W. 1982 Drug Metabolism Reviews 13(2):271-310
8135 Peribronchial node						Review of the metabolic fate of selenium in man and laboratory animals CANADA; GREECE; GUATEMALA; IOWA; NEW ZEALAND; OHIO; OREGON; SOUTH DAKOTA; UNITED KINGDOM; UNITED STATES; ADULTS; AGE; CHILDREN; CARCINOMAS; RESPIRATORY DISEASES; NUTRITIONAL DEFICIENCIES; BLOOD; BLOOD PLASMA; BODY; BREATH; ERYTHROCYTES; FECES; HAIR; KIDNEYS; LIVER; LUNGS; MILK; MUSCLES; PERIBRONCHIAL NODE; NAILS; PLACENTA; SKIN; SWEAT; THYROID GLANDS; URINE; SELENIUM; TRACE ELEMENTS; DIETS; FOODS; INDUSTRIES; METABOLISM; METABOLITES; RADIOISOTOPES; RADIONUCLIDES; RATS	Sopp, H.A. Sanders, H.C. Masterson, J.W. 1982 Drug Metabolism Reviews 13(2):271-310
8136 Pineal gland		NA	98	01.x10(E-6)-29.2x10(E-6) g/g dry wt	8.1x10(E-7) g/g dry wt	Autopsies 20-24 hr after death. Mean higher than means for 268 other areas of 7 brains ($2p<0.001$). Levels estimated from graph, constant over wide range of fresh weights, not related to age, sex or body surface. Positive correlation with Zn. 2-85 yr olds males and females AUTOPSIES; PINEAL GLAND; BRAIN; COMPARATIVE EVALUATIONS; ANTIMONY; CESIUM; COBALT; IRON; RUBIDIUM; SELENIUM; ZINC	Dumont, U. Hock, A. Kasperek, K. Poisendegen, L.H. 1982 Science of the Total Environment 24:135-144

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Selenium
7782-49-2
Se
AEW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 439 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8137 Placenta						Review of the metabolic fate of selenium in man and laboratory animals CANADA; GREECE; GUATEMALA; IOWA; NEW ZEALAND; OHIO; OREGON; SOUTH DAKOTA; UNITED KINGDOM; UNITED STATES; ADULTS; AGE; CHILDREN; CARCINOMAS; RESPIRATORY DISEASES; NUTRITIONAL DEFICIENCIES; BLOOD; BLOOD PLASMA; BONE; BRAIN; ERYTHROCYTES; FECES; HAIR; KIDNEYS; LIVER; LUNGS; MILK; MUSCLES; PERIBRONCHIAL NODE; NAILS; PLACENTA; SKIN; SWEAT; THYROID GLANDS; URINE; SELENIUM; TRACE ELEMENTS; DIETS; FOODS; INDUSTRIES; HEPATOLITHS; HEPATOLITHS; RADIOISOTOPES; RADIONUCLIDES; RATS	Bopp, B.A. Sanders, E.C. Robertson, J.W. 1982 Drug Metabolism Reviews 13(2):271-318
8138 Skin						Review of the metabolic fate of selenium in man and laboratory animals CANADA; GREECE; GUATEMALA; IOWA; NEW ZEALAND; OHIO; OREGON; SOUTH DAKOTA; UNITED KINGDOM; UNITED STATES; ADULTS; AGE; CHILDREN; CARCINOMAS; RESPIRATORY DISEASES; NUTRITIONAL DEFICIENCIES; BLOOD; BLOOD PLASMA; BONE; BRAIN; ERYTHROCYTES; FECES; HAIR; KIDNEYS; LIVER; LUNGS; MILK; MUSCLES; PERIBRONCHIAL NODE; NAILS; PLACENTA; SKIN; SWEAT; THYROID GLANDS; URINE; SELENIUM; TRACE ELEMENTS; DIETS; FOODS; INDUSTRIES; HEPATOLITHS; HEPATOLITHS; RADIOISOTOPES; RADIONUCLIDES; RATS	Bopp, B.A. Sanders, E.C. Robertson, J.W. 1982 Drug Metabolism Reviews 13(2):271-318

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Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8139 Sweat						Review of the metabolic fate of selenium in man and laboratory animals CANADA; GREECE; GUATEMALA; IOWA; NEW ZEALAND; OHIO; OREGON; SOUTH DAKOTA; UNITED KINGDOM; UNITED STATES; ADULTS; AGE; CHILDREN; CARCINOMAS; RESPIRATORY DISEASES; NUTRITIONAL DEFICIENCIES; BLOOD; BLOOD PLASMA; BODY; BREATH; ERYTHROCYTES; FECES; HAIR; KIDNEYS; LIVER; LUNGS; MILK; MUSCLES; PERIBRONCHIAL NODE; NAILS; PLACENTA; SKIN; SWEAT; THYROID GLANDS; URINE; SELENIUM; TRACE ELEMENTS; DIETS; FOODS; INDUSTRIES; METABOLISM; METABOLITES; RADIOISOTOPES; RADIONUCLIDES; RATS	Bopp, B.A. Sanders, R.C. Kesterson, J.W. 1982 Drug Metabolism Reviews 13(2):271-318
8140 Thyroid gland						Review of the metabolic fate of selenium in man and laboratory animals CANADA; GREECE; GUATEMALA; IOWA; NEW ZEALAND; OHIO; OREGON; SOUTH DAKOTA; UNITED KINGDOM; UNITED STATES; ADULTS; AGE; CHILDREN; CARCINOMAS; RESPIRATORY DISEASES; NUTRITIONAL DEFICIENCIES; BLOOD; BLOOD PLASMA; BODY; BREATH; ERYTHROCYTES; FECES; HAIR; KIDNEYS; LIVER; LUNGS; MILK; MUSCLES; PERIBRONCHIAL NODE; NAILS; PLACENTA; SKIN; SWEAT; THYROID GLANDS; URINE; SELENIUM; TRACE ELEMENTS; DIETS; FOODS; INDUSTRIES; METABOLISM; METABOLITES; RADIOISOTOPES; RADIONUCLIDES; RATS	Bopp, B.A. Sanders, R.C. Kesterson, J.W. 1982 Drug Metabolism Reviews 13(2):271-318
8141 Urine	Ingestion		a) 6 b) 6	a) 3-6 ug b) 9-19 ug	a) Not given b) Not given	a) Dose 50 ug b) Dose 100 ug Excreted after SeO3(2-) (as Se-74), oral, no times given Healthy young adults, NA CANADA; JAPAN; MASSACHUSETTS; NEW ZEALAND; UNITED STATES; ADOLESCENTS; ADULTS; CHILDREN; INFANTS; BLOOD PLASMA; FECES; URINE; MEASUREMENT METHODS; REVIEW; SELENIUM; DIETS; FOODS; RADIOISOTOPES; RADIONUCLIDES; RATS; SOILS; METALS	Young, V.R. Nahapetian, A. Janghorbani, M. 1982 American Journal of Clinical Nutrition 35:1076-1088

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Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8142 Urine						Review of the metabolic fate of selenium in man and laboratory animals CANADA; GREECE; GUATEMALA; IOWA; NEW ZEALAND; OHIO; OREGON; SOUTH DAKOTA; UNITED KINGDOM; UNITED STATES; ADULTS; AGE; CHILDREN; CARCINOMAS; RESPIRATORY DISEASES; NUTRITIONAL DEFICIENCIES; BLOOD; BLOOD PLASMA; BODY; BREAST; ERYTHROCYTES; FECES; HAIR; KIDNEYS; LIVER; LUNGS; NAILS; MUSCLES; PERIBRONCHIAL NODE; NAILS; PLACENTA; SKIN; SWEAT; THYROID GLAND; URINE; SELENIUM; TRACE ELEMENTS; DIETS; FOODS; INDUSTRIES; METABOLISM; METABOLITES; RADIOISOTOPES; RADIONUCLIDES; RATS	Dopp, H.A. Sanders, B.C. Masterson, J.W. 1982 Drug Metabolism Reviews 13(2):271-318
8143 Urine		Fluorometry		a) 27-64 ng/mg creatinine b) 20-233 ng/ml	a) 43.4 +or- 9.0 ng/mg creatinine b) 104.7 +or- 51.7 ng/ml	a) Single void urine expressed as ng/mg creatinine b) Samples a) expressed as ng/ml Significant correlations with erythrocyte Se 19-27 yr olds ADULTS; ERYTHROCYTES; URINE; COMPARATIVE EVALSATIONS; MEASUREMENT METHODS; SELENIUM	Hojo, Y. 1982 Bulletin of Environmental Contamination and Toxicology 29:37-42
8144 Urine		Fluorometry	a) 21 b) 23 c) 21 d) 2 e) 22 f) 14 g) 5 h) 1	a) 27-120 ng/mg creatinine b) 13-66 ng/mg creatinine c) 19-77 ng/mg creatinine d) 90-100 ng/mg creatinine e) 19-269 ng/mg creatinine f) 40-283 ng/mg creatinine g) 126-365 ng/mg creatinine h) Not given	a) 59.9 +or- 24.5 ng/mg creatinine b) 34.1 +or- 14.8 ng/mg creatinine c) 45.2 +or- 17.6 ng/mg creatinine d) 99.0 +or- 1.4 ng/mg creatinine e) 91.5 +or- 67.6 ng/mg creatinine f) 146.3 +or- 85.7 ng/mg creatinine g) 197.8 +or- 97.9 ng/mg creatinine h) 172 ng/mg creatinine	a) Controls b) Cancer patients c) Epilepsy patients d) Hypertensive patients e) Workers exposed to Mn f) Workers exposed to Cr g) Workers exposed to Cd h) Workers exposed to Hg Data also for levels/urine volume Japan JAPAN; DISEASES; URINE; SELENIUM; INDUSTRIAL PLANTS;	Hojo, Y. 1981 Bulletin of Environmental Contamination and Toxicology 26:466-471

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Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0145 Urine		Fluorometry	66	0-60 ug/g creatinine	28.65 +or- 8.27 ug/g creatinine	Range estimated from graph Healthy 5-18 yr olds, with familial short stature and constitutional growth delay, Long Island, NY NEW YORK; CHILDREN; BLOOD SERUM; HAIR; URINE; MEASUREMENT METHODS; SELENIUM	Chen, S.T. Collipp, P.J. Bossi, L.E. Isenschmid, D.S. Verella, R.J. San Roman, G.A. Yeh, J.K. 1982 Annals of Nutrition and Metabolism 26:186-190

Silver
7440-22-4
Ag
AtW 107.868, MP 960.5 C, BP 2000 C, VP 1 mm Hg at 1310 C, 10 mm Hg at 1540 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0146 Hair						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hopps, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).

Sodium
7440-23-5
Na
AtW 22.98977, MP 97.82 C, BP 881.4 C, VP 1 mm Hg at 440 C, 10 mm Hg at 546 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0147 Bone		AAS	35	a) 6,320-4,130 ppm b) 4,810-3,710 ppm c) 6,750-4,050 ppm d) 4,840-3,690 ppm e) 5,080-4,080 ppm f) 4,980-3,930 ppm	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) Total femur-rib, Middle Woodland Gibson site b) Total femur-rib, Late Woodland Ledders site c) Female femur-rib, Middle Woodland Gibson site d) Female femur-rib, Late Woodland Ledders site e) Male femur-rib, Middle Woodland Gibson site f) Male femur-rib, Late Woodland Ledders site Range of means Skeletal remains LEAD; MAGNESIUM; MANGANESE; POTASSIUM; SODIUM; STRONTIUM; ZINC; ALUMINUM; CALCIUM; IRON; ILLINOIS; CADAVERS; BONES	Lambert, J.B. Vlasak, S.M. Thometz, A.C. Buikstra, J.E. 1983 American Journal of Physical Anthropology 59:289-294
0140 Hair		NA	1	Not applicable	1,100 +or- 100 ppm	8 cm length, from distal end, obtained from Napoleon Bonaparte in 1821 CASE REPORTS; HAIR; ANTIMONY; ARSENIC; BOOKING; GOLD; POTASSIUM; SODIUM	Levin, P.H. Hancock, R.G.V. Voynovich, P. 1983 Nature 299:627-630
0149 Kidney		ICP-AES	a) 42 b) 39	a) 1090-3810 mg/kg b) 1555-3320 mg/kg Wet wt	a) 1800 mg/kg b) 1865 mg/kg Wet wt Medians	a) Cortex b) Medulla Autopsies within 48 hr Normal adults, Great Lakes region, Ontario, Canada CANADA; ADULTS; AUTOPSIES; KIDNEYS; LIVER; MEASUREMENT METHODS; CADMIUM; CALCIUM; COPPER; IRON; MAGNESIUM; MANGANESE; PHOSPHORUS; POTASSIUM; SODIUM; ZINC	Subramanian, K.S. Meranger, J.C. 1983 Science of the Total Environment 26:167-187
0150 Liver		ICP-AES	44	775-2170 mg/kg wet wt	1240 mg/kg wet wt Median	Autopsies within 48 hr Normal adults, Great Lakes region, Ontario, Canada CANADA; ADULTS; AUTOPSIES; KIDNEYS; LIVER; MEASUREMENT METHODS; CADMIUM; CALCIUM; COPPER; IRON; MAGNESIUM; MANGANESE; PHOSPHORUS; POTASSIUM; SODIUM; ZINC	Subramanian, K.S. Meranger, J.C. 1983 Science of the Total Environment 26:167-187

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Sodium
7440-23-5
Na
AtW 22.98977, MP 97.82 C, BP 881.4 C, VP 1 mm Hg at 440 C, 10 mm Hg at 566 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8151 Sweat						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CESIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).

Sodium, ion (Na(1+))
17341-25-2
Na
AtW 22.98977

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8152 Blood, plasma	Ingestion	Flame photometry	14	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 140 +or- 3 mmol b) 138 +or- 2 mmol c) 136 +or- 2 mmol d) 133 +or- 3 mmol e) 135 +or- 2 mmol f) 139 +or- 2 mmol g) 133 +or- 2 mmol h) 141 +or- 2 mmol S.D.	a) Infants fed mothers' milk, start of study, 7 cases b) At 1 wk, 7 cases c) At 2 wk, 7 cases d) At 4 wk, 5 cases e) Infants fed formula, start of study, 7 cases f) At 1 wk, 7 cases g) At 2 wk, 6 cases h) At 4 wk (+ supplements NaHCO3, Ca-lactate), 5 cases Hyponatremia (plasma NA <120 mmol/l) in 1 infant from each group. Premature infants, birth wt <1.3 kg, mean gestation time 28 wk, Canada PREMATURE INFANTS; CANADA; NUTRITIONAL DEFICIENCIES; BLOOD PLASMA; MILK; COMPARATIVE EVALUATIONS; CALCIUM; MAGNESIUM; MINERALS; PHOSPHORUS; POTASSIUM; SODIUM; FOODS; LACTATION	Atkinson, S.A. Hudde, T.C. Anderson, G.H. 1983 Journal of Pediatrics 102(1):98-106

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Sodium, ion (Na(1+))
17341-25-2
Na
AtW 22.98977

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8153 Milk						Review. General pharmacological principles associated with excretion of drugs and chemicals in human milk. PENNSYLVANIA; UNITED STATES; ADULTS; INFANTS; MILK; SALIVA; URINE; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTICOAGULANTS; ANTIPYRETICS; DIURETICS; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; CAFFEINE; NICOTINE; PESTICIDES; SODIUM; THEOPHYLLINES; ALCOHOLIC BEVERAGES; LACTATION; METABOLISM; METABOLITES; TOBACCOS	Berlin, C.M., Jr. 1981 Obstetrics and Gynecology 58(5)(supplement):17S-23S
8154 Milk		Flame photometry	7	a) Not given b) Not given c) Not given	a) 17.4 +or- 1.50 mmol b) 12.5 +or- 0.60 mmol c) 11.2 +or- 0.80 mmol S.E.	a) 6-8 days postpartum b) 13-15 days postpartum c) 26-28 days postpartum Mothers of premature infants. Infant birth wt <1.3 kg, mean gestational age 28 wk, Canada PREMATURE INFANTS; CANADA; NUTRITIONAL DEFICIENCIES; BLOOD PLASMA; MILK; COMPARATIVE EVALUATIONS; CALCIUM; MAGNESIUM; MINERALS; PHOSPHORUS; POTASSIUM; SODIUM; FOODS; LACTATION	Atkinson, S.A. Reddo, I.C. Anderson, G.H. 1983 Journal of Pediatrics 102(1):99-106

Starch, 2-hydroxyethyl ether
9005-27-0
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
MW approx 450,000

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8155 Blood, plasma	Injection	Chem	10	3.5-8.6 mg/ml	Not given	1 hr and 83 days after 500 ml Neopan (6% soln), IV. Declined to 47 and 23% of peak after 2 and 8 days, respectively. Estimated from graph. Healthy 22-33 yr olds, wt 63.5-90.0 kg 9% increase in plasma volume, back to baseline in 48 hr. Alpha-amylase activity doubled. ADULTS; BLOOD PLASMA; URINE; COMPARATIVE EVALUATIONS; DRUGS	Yasobi, A. Stoll, R.G. Sun, C.Y. Lei, C-M. Gupta, S.D. Mulso, J.D. 1982 Journal of Clinical Pharmacology 22:206-212

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Starch, 2-hydroxyethyl ether
9088-27-0
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
MW approx 450,000

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0156 Urine	Injection	Chem	10	46-84%	Not given	% of dose 3 and 8 days after 500 ml Rhepan (6% soln), IV Healthy 22-33 yr olds, wt 63.5-90.8 kg 9% increase in plasma volume, back to baseline in 48 hr. Alpha-amylase activity doubled. ADULTS; BLOOD PLASMA; URINE; COMPARATIVE EVALUATIONS; HUMAN	Yacobi, A. Stoll, R.G. Sun, C.Y. Lai, C-H. Gupta, S.D. Hulse, J.D. 1982 Journal of Clinical Pharmacology 22:208-212

Strontium
7440-24-6
Sr
AtW 87.62, MP 357 C, BP 1366 C, VP 10 mm Hg at 898 C, 1 mm Hg at 748 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0157 Bone		AAS	35	a) 220-192 ppm b) 155-150 ppm c) 197-174 ppm d) 169-173 ppm e) 251-197 ppm f) 141-135 ppm	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) Total femur-rib, Middle Woodland Gibson site b) Total femur-rib, Late Woodland Ledders site c) Female femur-rib, Middle Woodland Gibson site d) Female femur-rib, Late Woodland Ledders site e) Male femur-rib, Middle Woodland Gibson site f) Male femur-rib, Late Woodland Ledders site Range of means Skeletal remains LEAD; MAGNESIUM; MANGANESE; POTASSIUM; SODIUM; STRONTIUM; ZINC; ALUMINUM; CALCIUM; IRON; ILLINOIS; CADAVERS; BONES	Lambert, J.B. Vlasak, S.M. Thometz, A.C. Buikstra, J.E. 1982 American Journal of Physical Anthropology 59:289-294

Succinimide, 2-ethyl-5-methyl- (8 CI)
2,5-Pyrrolidinedione, 3-ethyl-3-methyl- (9 CI)
77-67-8
C7-H11-N-O2
MW 141.17, MP 64-65 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8150 Blood, serum						Review. Assessment of clinical use of laboratory determinations for metals, anticonvulsive agents, and cardiovascular drugs. ADULTS; AGE; CHILDREN; ANEMIA; BONE DISEASES; DISEASES; MENTAL RETARDATION; METAL POISONING; NUTRITIONAL DEFICIENCIES; SKIN DISEASES; BLOOD; BLOOD PLASMA; BLOOD SERUM; LIVER; URINE; ANTIARRHYTHMIC AGENTS; ANTICONVULSANTS; DIURETICS; DRUG THERAPY; DRUGS; HYPNOTICS; MUSCLE RELAXANTS; SEDATIVES; TRANQUILIZERS; REVIEW; COPPER; DIAZEPAM; IRON; LEAD; LITHIUM; TRICYCLICS; ZINC; PAPERS	Weiss, H.B. Rosenthal, I.M. 1978 Journal of Analytical Toxicology 2:166-171

Sulfur
7704-34-9
S
AtW 32.064, MP 115.21 C, BP about 444.6 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8150 Sweat						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, H.C. 1978 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1978, (pp. 59-73).

Sulphone (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8150 Milk						Review. General pharmacological principles associated with excretion of drugs and chemicals in human milk. PENNSYLVANIA; UNITED STATES; ADULTS; INFANTS; MILK; SALIVA; URINE; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTICOAGULANTS; ANTIPYRETICS; DIURETICS; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; CAFFEINE; NICOTINE; PESTICIDES; SODIUM; THEOPHYLLINES; ALCOHOLIC BEVERAGES; LACTATION; METABOLISM; METABOLITES; TOBACCOS	Berlin, C.N., Jr. 1981 Obstetrics and Gynecology 58(5)(supplement):17S-23S

Technetium, isotope of mass 99
14133-76-7
Tc
AtW 98.9062, MP about 2250 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8161 Milk	Injection	Radiometry	1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 0.288 uCi b) 1.131 uCi c) 0.494 uCi d) 0.093 uCi e) 0.017 uCi	a) 1 hr b) 3 hr c) 15.5 hr d) 20.5 hr e) 24 hr Level Tc at sampling time after 4 mCi Tc 99m macroaggregated human serum albumin, IV during lung scan. 2.02 uCi excreted within 24 hr, 70% within 3 hr, 94% within 15.5 hr 31 yr old nursing mother, 12 wk postpartum. ADULTS; MILK; TECHNETIUM; LACTATION; RADIOISOTOPES; RADIONUCLIDES	Pittard, W.B., III Markets, B. Fletcher, B.D. 1982 Pediatrics 70(2):231-234

Thiocyanic acid, ion(1-) (8 CI)
Thiocyanate (9 CI)
302-04-5
C-N-S
MW 58.08

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8162 Blood, fetal		Spectrophotometry	a) 29 b) 37 c) 41	a) 10-49 umol/l b) 0-79 umol/l c) 10-169 umol/l	a) 24.3 +or- 11.5 umol/l b) 32.0 +or- 16.3 umol/l c) 88.6 +or- 40.6 umol/l	a) Mothers not exposed to tobacco smoke b) Mothers passively exposed to tobacco smoke c) Mothers, smokers Siginificant difference between a) and b), c) and b) OHIO; NEWBORN; BLOOD; THIOCYANATES; SMOKING	Bottoms, S.F. Kuhnert, B.R. Reese, A.L. 1982 American Journal of Obstetrics and Gynecology 144(7):787-791

Thorium
7440-29-1
Th
AtW 232.0381, MP 1842 + or - 30 C (also reported as 1690 and 1750 C)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8163 Bone		Spectrometry	6	0.10-0.44 pCi/kg Wet wt	Not given	Vertebrae, sample size 80-500g. Non-occupational exposure THORIUM; BONES; LIVER; LUNGS; LYMPH NODES; MEASUREMENT METHODS; METALS; PLUTONIUM; FALLOUT; POPULATION EXPOSURE; RADIOISOTOPES; RADIONUCLIDES	Singh, M.P. Ibrahim, S.A. Cohen, N. Wrenn, M.E. 1979 Analytical Chemistry 51(12):1978-1981
8164 Liver		Spectrometry	8	0.005-0.37 pCi/kg Wet wt	Not given	Non-occupational exposure THORIUM; BONES; LIVER; LUNGS; LYMPH NODES; MEASUREMENT METHODS; METALS; PLUTONIUM; FALLOUT; POPULATION EXPOSURE; RADIOISOTOPES; RADIONUCLIDES	Singh, M.P. Ibrahim, S.A. Cohen, N. Wrenn, M.E. 1979 Analytical Chemistry 51(12):1978-1981
8165 Lung		Spectrometry	8	0.01-0.98 pCi/kg Wet wt	Not given	Non-occupational exposure THORIUM; BONES; LIVER; LUNGS; LYMPH NODES; MEASUREMENT METHODS; METALS; PLUTONIUM; FALLOUT; POPULATION EXPOSURE; RADIOISOTOPES; RADIONUCLIDES	Singh, M.P. Ibrahim, S.A. Cohen, N. Wrenn, M.E. 1979 Analytical Chemistry 51(12):1978-1981

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Thorium
7440-29-1
Th
AtW 232.0381, MP 1842 + or - 30 C (also reported as 1690 and 1750 C)

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8166 Lymph node		Spectrometry	7	5.7-23.0 pCi/kg Wet wt	Not given	Non-occupational exposure THORIUM; BONES; LIVER; LUNGS; LYMPH NODES; MEASUREMENT METHODS; METALS; PLUTONIUM; FALLOUT; POPULATION EXPOSURE; RADIOISOTOPES; RADIONUCLIDES	Singh, N.P. Ibrahim, S.A. Cohen, N. Wrenn, M.E. 1979 Analytical Chemistry 51(12):1978-1981

Thorium, isotope of mass 228
14274-82-9
Th
MW 232.0381, MP approx 1750 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8167 Bone		Spectrometry	6	0.04-2.27 pCi/Kg Wet wt	Not given	Vertebrae, sample size 80-500g. Non-occupational exposure THORIUM; BONES; LIVER; LUNGS; LYMPH NODES; MEASUREMENT METHODS; METALS; PLUTONIUM; FALLOUT; POPULATION EXPOSURE; RADIOISOTOPES; RADIONUCLIDES	Singh, N.P. Ibrahim, S.A. Cohen, N. Wrenn, M.E. 1979 Analytical Chemistry 51(12):1978-1981
8168 Liver		Spectrometry	8	0.02-0.51 pCi/kg Wet wt	Not given	Non-occupational exposure THORIUM; BONES; LIVER; LUNGS; LYMPH NODES; MEASUREMENT METHODS; METALS; PLUTONIUM; FALLOUT; POPULATION EXPOSURE; RADIOISOTOPES; RADIONUCLIDES	Singh, N.P. Ibrahim, S.A. Cohen, N. Wrenn, M.E. 1979 Analytical Chemistry 51(12):1978-1981
8169 Lung		Spectrometry	8	0.06-0.67 pCi/kg Wet wt	Not given	Non-occupational exposure THORIUM; BONES; LIVER; LUNGS; LYMPH NODES; MEASUREMENT METHODS; METALS; PLUTONIUM; FALLOUT; POPULATION EXPOSURE; RADIOISOTOPES; RADIONUCLIDES	Singh, N.P. Ibrahim, S.A. Cohen, N. Wrenn, M.E. 1979 Analytical Chemistry 51(12):1978-1981
8170 Lymph node		Spectrometry	7	1.6-17.4 pCi/kg Wet wt	Not given	Non-occupational exposure THORIUM; BONES; LIVER; LUNGS; LYMPH NODES; MEASUREMENT METHODS; METALS; PLUTONIUM; FALLOUT; POPULATION EXPOSURE; RADIOISOTOPES; RADIONUCLIDES	Singh, N.P. Ibrahim, S.A. Cohen, N. Wrenn, M.E. 1979 Analytical Chemistry 51(12):1978-1981

Thorium, isotope of mass 230
14269-63-7
Th
RW 230

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8171 Bone		Spectrometry	6	0.48-132 pCi/kg Wet wt	Not given	Vertebrae, sample size 80-500g. Non-occupational exposure THORIUM; BONES; LIVER; LUNGS; LYMPH NODES; MEASUREMENT METHODS; METALS; PLUTONIUM; FALLOUT; POPULATION EXPOSURE; RADIOISOTOPES; RADIONUCLIDES	Singh, N.P. Ibrahim, S.A. Cohen, N. Wrenn, M.E. 1979 Analytical Chemistry 51(12):1978-1981
8172 Liver		Spectrometry	0	0.03-0.03 pCi/kg Wet wt	Not given	Non-occupational exposure THORIUM; BONES; LIVER; LUNGS; LYMPH NODES; MEASUREMENT METHODS; METALS; PLUTONIUM; FALLOUT; POPULATION EXPOSURE; RADIOISOTOPES; RADIONUCLIDES	Singh, N.P. Ibrahim, S.A. Cohen, N. Wrenn, M.E. 1979 Analytical Chemistry 51(12):1978-1981
8173 Lung		Spectrometry	8	0.20-12.0 pCi/kg Wet wt	Not given	Non-occupational exposure THORIUM; BONES; LIVER; LUNGS; LYMPH NODES; MEASUREMENT METHODS; METALS; PLUTONIUM; FALLOUT; POPULATION EXPOSURE; RADIOISOTOPES; RADIONUCLIDES	Singh, N.P. Ibrahim, S.A. Cohen, N. Wrenn, M.E. 1979 Analytical Chemistry 51(12):1978-1981
8174 Lymph node		Spectrometry	7	7.7-61 pCi/kg Wet wt	Not given	Non-occupational exposure THORIUM; BONES; LIVER; LUNGS; LYMPH NODES; MEASUREMENT METHODS; METALS; PLUTONIUM; FALLOUT; POPULATION EXPOSURE; RADIOISOTOPES; RADIONUCLIDES	Singh, N.P. Ibrahim, S.A. Cohen, N. Wrenn, M.E. 1979 Analytical Chemistry 51(12):1978-1981

Tin
7440-31-5
Sn
Atw 118.69, MP 231.9 C, BP 2507 C, VP 1 mm Hg at 1610 C, 10 mm Hg at 1890 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0175 Blood		NA	1	Not given	48 +or- 29 ng/ml	6 determinations, 3 hr-4 days after spraying 60% triphenyltin acetate (Brestan 60) solution on rice field. 53 yr old epileptic farmer, Italy Headache, dizziness, asthenia, dry of mouth, photophobia, paresthesia, erythema, epileptic seizure ITALY; ADULTS; METAL POISONING; BLOOD; URINE; METALS; PESTICIDES; TIN; AGRICULTURE; CROP DUSTING; FARMS; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; RICE	Manno, L. Richelmi, P. Sabbioni, E. Pietra, R. Bono, F. Guardia, L. 1981 Clinical Toxicology 18(11):1343-1353
0176 Urine	Ingestion	Colorimetry	8	a) 81-246 ug/day b) 7-58 ug/day	a) 122 +or- 52 ug b) 29 +or- 13 ug c) 60 +or- 25 ug/g creatinine d) 15 +or- 8 ug/g creatinine 29 ug/day	a) Test diet containing 49.7 ug/day for 20 days b) Control diet containing 0.11 ug/day for 20 days c) Test diet 49.7 ug/day d) Control diet 0.11 ug/day 24 hr excretions. Significant difference between test group and controls (p<0.001) Healthy students, 23.9 yr old, ht 179 cm, wt 76 kg, WI URINE; ADULTS; CALCIUM; TIN; DIETS; METABOLISM	Johnson, N.A. Kroger, J.L. 1982 American Journal of Clinical Nutrition 35:655-660
0177 Urine		NA	1	Not given	113 +or- 20.6 ng/ml	6 determinations, 3 hr-4 days after spraying 60% triphenyltin acetate (Brestan 60) solution on rice field. 53 yr old epileptic farmer, Italy Headache, dizziness, asthenia, dry mouth, photophobia, paresthesia, erythema, epileptic seizure ITALY; ADULTS; METAL POISONING; BLOOD; URINE; METALS; PESTICIDES; TIN; AGRICULTURE; CROP DUSTING; FARMS; HEALTH HAZARDS; OCCUPATIONAL HAZARDS; RICE	Manno, L. Richelmi, P. Sabbioni, E. Pietra, R. Bono, F. Guardia, L. 1981 Clinical Toxicology 18(11):1343-1353

Titanium
7440-32-6
Ti
AtW 47.90, MP 1677 C, BP 3277 C, VP 1 mm Hg at 2180 C, 10 mm Hg at 2480 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0178 Hair						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALCHEMON; ARTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY, NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, E.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).

Toluene (8 CI)
Benzene, methyl- (9 CI)
108-88-3
C7-58
MW 92.13, MP -95 to -94.5 C, BP 110.6 C, VP 36.7 mm Hg at 30 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0179 Blood	Inhalation	GC HPLC MS	9-20	a) 14-50 ug/l b) 8-138 ug/l c) 19-576 ug/l	a) 28.3 ug/l b) 38.5 ug/l c) 198.9 ug/l	a) Monday morning b) Friday morning c) Friday afternoon Venous blood samples from workers in art furniture factory. Friday afternoon air levels of 15-164 ug/l were correlated with blood levels (r=0.88847, p=0.001). ITALY; BLOOD; URINE; HUMANS; INDUSTRIAL MEDICINE; INDUSTRIAL ATMOSPHERES; INHALATION; OCCUPATIONAL HAZARDS; INDUSTRIAL CHEMICALS; SOLVENTS	Apostoli, P. Brugnone, F. Perbellini, L. Cocheo, V. Bellomo, M.L. Silvestri, S. 1982 International Archives of Occupational and Environmental Health 50:153-160
0180 Breath	Inhalation	GC HPLC MS	16	3-48 ug/l		Alveolar air samples Friday afternoon when environmental air levels were 15-164 ug/l. Correlation (r=0.7419, p<0.001) with toluene in blood. Art furniture factory workers. ITALY; BLOOD; URINE; HUMANS; INDUSTRIAL MEDICINE; INDUSTRIAL ATMOSPHERES; INHALATION; OCCUPATIONAL HAZARDS; INDUSTRIAL CHEMICALS; SOLVENTS	Apostoli, P. Brugnone, F. Perbellini, L. Cocheo, V. Bellomo, M.L. Silvestri, S. 1982 International Archives of Occupational and Environmental Health 50:153-160

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Toluene (8 CI)
Benzene, methyl- (9 CI)
108-88-3
C7-H8
MW 92.13, MP -95 to -94.5 C, BP 110.6 C, VP 36.7 mm Hg at 30 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8101 Urine	Inhalation	GC HPLC MS	6-20	a) 0-188 ug/l b) 7-63 mg/l c) 0.25-1.66 g/l d) 0-273 ug/l e) 3-61 mg/l f) 0.21-1.72 g/l g) 0-784 ug/l h) 2-74 mg/l i) 0.21-2.2 g/l	a) 39.5 ug/l) 21.8 mg/l c) 0.73 g/l d) 68.2 ug/l e) 19.6 mg/l f) 0.69 g/l g) 122.3 ug/l h) 24.2 mg/l i) 0.845 g/l	a) ortho-Cresol, Monday morning b) meta-para Cresol, Monday morning c) Hippuric acid, Monday morning d) ortho-Cresol, Friday morning e) meta-para-Cresol, Friday morning f) Hippuric acid, Friday morning g) ortho-Cresol, Friday afternoon h) meta-para-Cresol, Friday afternoon i) Hippuric acid, Friday afternoon Urinary metabolites in workers at an art furniture factory. Friday afternoon air levels were 15-164 ug/l. ITALY; BLOOD; URINE; BREATH; INDUSTRIAL MEDICINE; INDUSTRIAL ATMOSPHERES; INHALATION; OCCUPATIONAL HAZARDS; INDUSTRIAL CHEMICALS; SOLVENTS	Apostoli, P. Brugnone, F. Perbellini, L. Cochoe, V. Bollomo, M.L. Silvestri, R. 1982 International Archives of Occupational and Environmental Health 50:153-160

Valeric acid, 2-propyl- (8 CI)
Pentanoic acid, 2-propyl- (9 CI)
99-66-1
C8-H16-02
MW 144.21, BP 120-121 C at 16 mm Hg, 128-130 C at 20 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8102 Blood, serum						Review. Assessment of clinical use of laboratory determinations for metals, anticonvulsive agents, and cardiovascular drugs. ADULTS; AGE; CHILDREN; ANEMIA; BONE DISEASES; DISEASES; MENTAL RETARDATION; METAL POISONING; NUTRITIONAL DEFICIENCIES; SKIN DISEASES; BLOOD; BLOOD PLASMA; BLOOD SERUM; LIVER; URINE; ANTIARRHYTHMIC AGENTS; ANTICONVULSANTS; DIURETICS; DRUG THERAPY; DRUGS; HYPNOTICS; MUSCLE RELAXANTS; SEDATIVES; TRANQUILIZERS; REVIEW; COPPER; DIAZEPAM; IRON; LEAD; LITHIUM; THEOPHYLLINES; ZINC; PAINTS	Weiss, H.D. Rosenthal, I.M. 1979 Journal of Analytical Toxicology 2:166-171

Vanadium
7440-62-2
V
AtW 50.9414, MP 1917 C, BP 3000 C, VP 1 mm Hg at 2290 C, 10 mm Hg at 2570 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8183 Hair						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 69-73).

Vitamin B12
68-19-9
C63-H88-Co-N14-O14-P
MW 1355.62

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8186 Blood, serum		Microbiological	a) 65 b) 67 c) 124	a) Not given b) Not given c) Not given	a) 440 +or- 159 ug/l b) 647 +or- 386 ug/l c) 363 +or- 183 ug/l	a) European b) West Indians c) Asians 13 yr olds, similar wt, ht ASIA; INDIA; UNITED KINGDOM; ADULTS; CHILDREN; RACIAL FACTORS; DOSE RESPONSE; BLOOD SERUM; CALCIUM; VITAMIN B; VITAMINS; DIETS; GENETIC EFFECTS	Ellis, G. Goodhead, J.S. Cooke, W.T. 1977 Lancet 1:628-630

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Vitamin B12
68-19-9
C63-H88-Co-N14-O14-P
MW 1355.42

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0105 Blood, serum			4	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 212 ng/l b) 103 ng/l c) 126 ng/l d) 58 ng/l e) 152 ng/l	a) Mother, strict vegetarian b) Father, lactovegetarian c) Breast-fed infant at 8 mo d) Breast-fed infant at 9 mo e) Older brother Caucasians, South Australia. Mother used no foods of animal origin, drugs or food supplements during pregnancy. Infant (birth wt 2870 g) on breast milk, exclusively. Initially (3-6 mo), apathy, hypotonia, and regression in motor behavior and development milestones, followed by (8 mo) unusual patterns of motor activity (trembling, twitching, or involuntary movements), and finally (9 mo) coma, hypothermia, and respiratory impairment. Symptoms disappeared with vitamin B-12 therapy. Permanent impairment of intellectual functioning. AUSTRALIA; ADULTS; AGE; CASE HISTORIES; CHILDREN; INFANTS; NUTRITIONAL DEFICIENCIES; BLOOD SERUM; MILK; VITAMINS; DIETS; LACTATION	Wighton, H.C. Hanson, J.I. Speed, I. Robertson, E. Chapman, E. 1979 Medical Journal of Australia 2(1):1-3
0106 Milk			a) 1 b) 10	a) Not applicable b) 280-2100 ng/l	a) 250 ng/l b) Not given	a) Lactating woman on strict vegetarian diet after 200 ug/day Vitamin B-12 for 3 wk b) Lactating woman on mixed diet Caucasian mother of 9 mo old infant and controls, South Australia AUSTRALIA; ADULTS; AGE; CASE HISTORIES; CHILDREN; INFANTS; NUTRITIONAL DEFICIENCIES; BLOOD SERUM; MILK; VITAMINS; DIETS; LACTATION	Wighton, H.C. Hanson, J.I. Speed, I. Robertson, E. Chapman, E. 1979 Medical Journal of Australia 2(1):1-3

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8187 Adipose		AAS	41	1.59-3.89 ug/g dry wt 10th and 90th percentile	2.26 ug/g dry wt Median	Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, B.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
8188 Aorta		AAS	43	23.7-51.8 ug/g dry wt 10th and 90th percentile	35.9 ug/g dry wt Median	Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, B.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
8189 Blood		AAS	23	0.02-0.64 mg/period	0.23 +or- 0.20 mg/period	Losses in menstrual blood. Mean hemoglobin 13.90 g/dl, hematocrit 41.00%, blood serum Fe 93.40 mg/dl Healthy 21-50 yr olds (mean 24.4 yr), controlled metabolic diet, some on oral contraceptives, Nebraska BLOOD; NEBRASKA; ORAL CONTRACEPTIVES; COPPER; HEMOGLOBINS; IRON; MAGNESIUM; ZINC; DIETS; MENSTRUATION	Unsren, J. Kies, C. 1982 Nutrition Reports International 26(4):717-726

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Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0190 Blood		AAS	95	388-739 ug/dl	Not given	Miners and millworkers Caucasian and Inuit workers, 18-59 yr old, Canada CANADA; ADULTS; CHILDREN; BLOOD; CADMIUM; LEAD; MERCURY; ZINC; INDUSTRIAL ATMOSPHERES; MINING; OCCUPATIONAL HAZARDS; SMELTING	Parent, J.P. Wigfield, D.C. 1982 International Archives of Occupational and Environmental Health 51:15-24
0191 Blood, cells	Injection Ingestion	Radiometry	17	a) 1.1-6.4% b) 0.015-2.4%	a) Not given b) Not given	a) IV b) Oral % of dose as Zn-69m 3 min-5 days after 50 uCi. Range of means estimated from graph. 21-73 yr olds (mean 51 yr), wt 44.6-96 kg (mean 69 kg). METABOLISM; RADIONUCLIDES; BLOOD PLASMA; BODY; ERYTHROCYTES; LIVER; URINE; ZINC	Aamodt, R.L. Rumble, W.F. Johnston, G.S. Foster, D. Rankin, B.I. 1979 American Journal of Clinical Nutrition 32:559-569
0192 Blood, plasma						Review. Requirements, intake, absorption, and bioavailability including influence of extrinsic and intrinsic factors, hormones, drugs, and diseases. SWEAT; PANCREATIC FLUID; GUATEMALA; IRAN; MASSACHUSETTS; NORTH DAKOTA; UNITED STATES; ADULTS; INFANTS; DISEASES; BLOOD PLASMA; BLOOD SERUM; FECES; MILK; URINE; DRUGS; ORAL CONTRACEPTIVES; REVIEW; IRON; MAGNESIUM; TIN; ZINC; DIETS; FOODS; LACTATION; PREGNANCY; RADIOISOTOPES; RADIONUCLIDES; RATS	Solomons, N.W. 1982 American Journal of Clinical Nutrition 35:1048-1075
0193 Blood, plasma	Ingestion	AAS	9	a) 78-120 ug/100 ml b) 55-105 ug/100 ml c) 67-116 ug/100 ml	a) 89 +or- 12 ug/100 ml b) 85 +or- 12 ug/100 ml c) 98 +or- 12 ug/100 ml	a) Zn 10.01 mg, Ca 780 mg, P 883 mg b) Zn 10.43 mg, Ca 780 mg, P 2042 mg c) Zn 10.44 mg, Ca 2302 mg, P 2043 mg Daily intake for 12 days. Fasting samples collected 2X during each experimental period. No significant effect of dietary treatments. College students, mean age 23.6 yr, ht 179 cm, wt 73 kg WISCONSIN; BLOOD PLASMA; BLOOD SERUM; URINE; COMPARATIVE EVALUATIONS; CALCIUM; COPPER; IRON; PHOSPHORUS; ZINC; DIETS	Snedeker, S.M. Smith, S.A. Gregor, J.L. 1982 Journal of Nutrition 112:136-143

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Zinc
7440-66-6
Zn
AAW o>.30, MP 419.5 C, BP 906 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8194 Blood, plasma	Injection Ingestion	Radiometry	1)	a) 78-1.1% b) 1.2-0.5%	a) Not given b) Not given	a) 0 hr-4 days after IV b) 2 hr-4 day after oral % of dose as Zn-65m (50 uCi). Range of means estimated from graph. 21-73 yr olds (mean 51 yr), wt 46.6-96 kg (mean 69 kg) METABOLISM; RADIONUCLIDES; BLOOD PLASMA; BODY; ERYTHROCYTES; LIVER; URINE; ZINC	Aamodt, R.L. Rumble, W.F. Johnston, G.S. Foster, D. Henkin, R.I. 1979 American Journal of Clinical Nutrition 32:590-569
8195 Blood, plasma	Ingestion	AAS	8	a) Not given b) Not given c) 90-126 ug/dl	a) 103 +or- 11 ug/dl b) 102 +or- 12 ug/dl c) Not given	a) Intake 13.5 mg Zn and 49.67 mg Cu/day, 30 days b) Intake 13.5 mg Zn and 0.11 mg Cu/day, 30 days c) Range during a) and b) Sampled before breakfast on day 11 & 17 Level not affected by dietary treatments Healthy 21.0-30.0 yr olds, ht 168-192 cm, wt 69-83 kg WISCONSIN; ADULTS; BLOOD PLASMA; BLOOD SERUM; FECES; URINE; COMPARATIVE EVALUATIONS; COPPER; IRON; MAGNESIUM; MANGANESE; TIN; ZINC; DIETS; FOOD CONTAMINATION; METABOLISM; MINERAL METABOLISM	Johnson, M.A. Baier, M.J. Kroger, J.L. 1983 American Journal of Clinical Nutrition 38:1332-1338
8196 Blood, plasma			208	a) 0.51-0.98 ug/ml b) 0.46-0.78 ug/ml c) 0.53-1.00 ug/ml d) 0.56-1.17 ug/ml e) 0.46-1.17 ug/ml	a) 0.665 ug/ml b) 0.631 ug/ml c) 0.748 ug/ml d) 0.770 ug/ml e) 0.727 ug/ml	a) Gre Are Point, 60 cases b) Lombadina, 10 cases c) Beagle Bay, 37 cases d) La Grange, 93 cases e) All locations, 208 cases Hypozincemia in 63% of samples in a)-c) and 30% in d). 5-30 yr old Aborigines, Northwest Australia APOCRALIA; CHILDREN; NUTRITIONAL DEFICIENCIES; BLOOD PLASMA; HAIR; COPPER; IRON; ZINC; DIETS; DRINKING WATER	Cheek, D.B. Smith, R.M. Sponge, R.M. 1983 Clinical Applications of Recent Advances in Zinc Metabolism. Alan R. Liss, Inc., New York City, NY, (pp. 151-167).

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Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 598 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0187 Blood, serum	Injection	AAS	3	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 28 ug/100 ml b) 23 ug/100 ml c) 16 ug/100 ml d) 23 ug/100 ml	a) 8 wk old. Surgery on 1st day of life, again at 7 wk b) 6 wk old. Surgery on 1st day of life c) 7 wk old. Surgery on 9th day of life d) Infant c) at 10 wk. 2nd surgery at 16 wk. Infants on parenteral nutrition supplemented with ZnSO4 to provide 80 ug/kg/day elemental Zn following abdominal surgery. Premature infants, wt 1,300-2,400 gm, born at 33-35 wk gestation Skin breakdown in perioral, perianal, and intertriginous areas. Septicemia in a), c), and d). Supplementation at 250-400 ug/kg/day required for healing of lesions. CASE HISTORIES; INFANTS; INFECTION; NUTRITIONAL DEFICIENCIES; BLOOD SERUM; SURGERY; METALS; ZINC	Palma, P.A. Conley, S.B. Crandell, S.S. Benson, S.R. 1983 Pediatrics 69(6):801-803
0198 Blood, serum						Review. Assessment of clinical use of laboratory determinations for metals, anticonvulsive agents, and cardiovascular drugs. ADULTS; AGE; CHILDREN; ANEMIA; BONE DISEASES; DISEASES; MENTAL RETARDATION; METAL POISONING; NUTRITIONAL DEFICIENCIES; SKIN DISEASES; BLOOD; BLOOD PLASMA; BLOOD SERUM; LIVER; URINE; ANTIARRHYTHMIC AGENTS; ANTICONVULSANTS; DIURETICS; DRUG THERAPY; DRUGS; HYPNOTICS; MUSCLE RELAXANTS; SEDATIVES; TRANQUILIZERS; REVIEW; COPPER; DIAZEPAM; IRON; LEAD; LITHIUM; THEOPHYLLINES; ZINC; PAINTS	Weiss, S.D. Rosenthal, I.M. 1978 Journal of Analytical Toxicology 2:166-171

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Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 598 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8198 Body	Injection Ingestion	Radiometry	17	a) 72-7.2% b) 0.1-3.3%	a) Not given b) Not given	a) IV, low was 4.2% about 6 hr after dose b) Oral, peak was 3.3% 4 days after dose % of dose as Zn-65m 0-5 days after 50 uCi. Range of means estimated from graph. 21-73 yr olds (mean 51 yr), wt 44.6-96 kg (mean 69 kg) METABOLISM; RADIONUCLIDES; BLOOD PLASMA; BODY; ERYTHROCYTES; LIVER; URINE; ZINC	Arnodt, R.L. Humble, W.F. Johnston, G.S. Foster, D. Henkin, R.I. 1979 American Journal of Clinical Nutrition 32:859-869
8200 Bone		AAS	50	110-205 ug/g dry wt 10th and 90th percentile	151 ug/g dry wt Median	Autopsies within 24 hr 9 neonates (1-16 wk old), 3 infants (1-8 yr old), 44 adults (15-70 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AGENA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, H.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
8201 Bone		AAS	35	a) 307-382 ppm b) 210-300 ppm c) 361-270 ppm d) 306-225 ppm e) 263-325 ppm f) 323-375 ppm	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) Total femur-rib, Middle Woodland Gibson site b) Total femur-rib, Late Woodland Loddora site c) Female femur-rib, Middle Woodland Gibson site d) Female femur-rib, Late Woodland Loddora site e) Male femur-rib, Middle Woodland Gibson site f) Male femur-rib, Late Woodland Loddora site Range of means Skeletal remains LEAD; MAGNESIUM; MANGANESE; POTASSIUM; SODIUM; STRONTIUM; ZINC; ALUMINUM; CALCIUM; IRON; ILLINOIS; CADAVERS; BONES	Lambert, J.B. Vlasak, S.M. Thometz, A.C. Buikstra, J.E. 1982 American Journal of Physical Anthropology 59:289-294

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Zinc
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Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 598 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8203 Cartilage		AAS	67	a) 15.0-67.4 ug/g (10th and 90th percentile) b) Not given c) Not given Dry wt	a) 26.2 ug/g (median) b) 33.7 +or- 4.6 ug/g c) 38.6 +or- 12.1 ug/g Dry wt	a) All cases b) Adult men c) Adult women Significant difference between b), c) (p<0.001). Autopsies within 36 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 46 adults (18-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, D.H. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
8203 Hair		X-ray spectrom	a) 1 b) 1 c) 1 d) 1	a) 148.6-155.0 ug/g b) 50-120 ug/g c) 40-95 ug/g d) 150-230 ug/g	a) Not given b) Not given c) Not given d) Not given	a) 5 measurements at counting times of 300-5000 sec, 1 mm section of single hair, linear density 6.6 ug/mm b) 0-220 mm from cut end, Iraqi woman from one region c) 0-220 mm from cut end, individual from area of high fish consumption d) 0-120 mm from cut end, Canadian Inuit fishing guide Estimated from graph (b)-d)). CANADA; IRAQ; ADULTS; HAIR; MEASUREMENT METHODS; CALCIUM; COPPER; IRON; LEAD; MERCURY; ZINC; BIOACCUMULATION; DIETS; FISHES; FOOD CONTAMINATION	Teribara, T.Y. Jackson, D.A. French, W.B. Thompson, A.C. Jablovic, J.M. 1982 Analytical Chemistry 54:1844-1848
8204 Hair						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ANTIMONY; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 8th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).

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Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 598 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8285 Hair		AAS	45	74.0-172 ug/g dry wt 10th and 90th percentile	144 ug/g dry wt Median	Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-8 yr old), 44 adults (18-76 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, H.E. Robinson, M.F. 1983 Biological Trace Element Research 4:105-118
8286 Hair		NA	a) 51 b) 52	a) 38-170 ug/g b) 48-210 ug/g 25th-75th percentiles	a) 85 ug/g b) 100 ug/g Medians	a) Drank hard tapwater (mean hardness 330 ppm) at least 1 yr b) Drank soft tapwater (mean hardness 33 ppm) Significant difference ($p<0.0001$). Mean daily intakes of energy, protein, Fe, Cu, Mn, and dietary fiber similar. Range estimated from graph Healthy Caucasian preschool children matched by age (0.5-5.5 yr old), sex, and socioeconomic status, Guelph, Ontario (hard water area) and Halifax, Nova Scotia (soft water area), Canada Children in b) significantly heavier ($p<0.001$) and slightly taller ($p=0.05$) than a). CANADA; AGE; CHILDREN; SEX; NUTRITIONAL DEFICIENCIES; HAIR; CALCIUM; COPPER; MANGANESE; ZINC; DRINKING WATER	Gibson, R.S. Anderson, D.M. Scythes, C.A. 1983 American Journal of Clinical Nutrition 37:37-43

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Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 598 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0207 Hair			a) 205 b) 132	a) Not given b) Not given	a) 185.6 +or- 2.26 ug/g b) 153 +or- 5 ug/g S.E.	a) Aborigines b) Caucasians Significant difference (p<0.001) 5-20 yr old aborigines, Northwest Australia and normal Caucasian children. AUSTRALIA; CHILDREN; NUTRITIONAL DEFICIENCIES; BLOOD PLASMA; HAIR; COPPER; IRON; ZINC; DIETS; DRINKING WATER	Cheek, D.B. Smith, R.M. Sparge, R.M. 1982 Clinical Applications of Recent Advances in Zinc Metabolism. Alan R. Liss, Inc., New York City, NY, (pp. 151-167).
0208 Heart		AAS	46	87.7-125 ug/g dry wt 10th and 90th percentile	99.1 ug/g dry wt Median	Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 46 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, H.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
0209 Kidney		ICP-AES	a) 42 b) 39	a) 16-110 mg/kg b) 13-62 mg/kg Wet wt	a) 44 mg/kg b) 32 mg/kg Wet wt Medians	a) Cortex b) Medulla Autopsies within 48 hr Normal adults, Great Lakes region, Ontario, Canada CANADA; ADULTS; AUTOPSIES; KIDNEYS; LIVER; MEASUREMENT METHODS; CADMIUM; CALCIUM; COPPER; IRON; MAGNESIUM; MANGANESE; PHOSPHORUS; POTASSIUM; SODIUM; ZINC	Subramanian, K.S. Meranger, J.C. 1982 Science of the Total Environment 24:167-157

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Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8210 Kidney		AAS	55	a) 99.1-267 ug/g b) Not given c) Not given d) 50.6-120 ug/g e) Not given f) Not given 10th and 90th percentiles Dry wt	a) 176 ug/g (median) b) 99.5 +or- 16.0 ug/g c) 197 +or- 60 ug/g d) 81.0 ug/g (median) e) 58.7 +or- 4.1 ug/g f) 90.6 +or- 25.2 ug/g Dry wt	a) Cortex, 46 samples b) Infant cortices c) Adult cortices d) Medulla, 45 samples e) Infant medullas f) Adult medullas Significant difference between b), c) (p<0.001), e), f) (p<0.01). Levels increased with age (Pearson correlation coefficient, r=0.447, S=0.002, a) and r=0.363, S=0.010, d)) Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, B.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
8211 Liver	Injection Ingestion	Radiometry	17	a) 60%-42% b) 38%-23%	a) Not given b) Not given	a) IV, 2 hr-5 days, 50% level reached by 15 min b) Oral, 6 hr-5 days, initial measurement 18% % of dose (50 uCi of Zn-69m). Range of means estimated from graph. 21-73 yr olds (mean 51 yr), wt 44.6-96 kg (mean 69 kg) METABOLISM; RADIONUCLIDES; BLOOD PLASMA; BODY; ERYTHROCYTES; LIVER; URINE; ZINC	Aamodt, R.L. Rumble, W.F. Johnston, G.S. Foster, D. Henkin, R.I. 1979 American Journal of Clinical Nutrition 32:558-569
8212 Liver		ICP-AES	44	29-180 mg/kg wet wt	66 mg/kg wet wt Median	Autopsies within 48 hr Normal adults, Great Lakes region, Ontario, Canada CANADA; ADULTS; AUTOPSIES; KIDNEYS; LIVER; MEASUREMENT METHODS; CADMIUM; CALCIUM; COPPER; IRON; MAGNESIUM; MANGANESE; PHOSPHORUS; POTASSIUM; SODIUM; ZINC	Subramanian, K.S. Meranger, J.C. 1982 Science of the Total Environment 24:147-157

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Zinc
7440-66-6
Zn
ACW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0213 Liver		AAS	53	123-258 ug/g dry wt 10th and 90th percentile	199 ug/g dry wt Median	Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, B.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
0214 Lung		AAS	52	3.93-68.4 ug/g dry wt 10th and 90th percentile	50.2 ug/g dry wt Median	Levels decreased with age (Pearson correlation coefficient, r=-0.340, P=0.003). Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, B.E. Robinson, M.F. 1982 Biological Trace Element Research 4:105-115
0215 Milk		AAS	23	0.29-5.70 ug/ml	1.10 +or- 1.19 ug/ml	20.7% in fat, 48.4% in proteins, 24.6% in low molecular wt fraction, 3.3% in large particles such as casein micelles. Samples collected at 2nd nursing of day. Higher values found in early months of lactation. Level per ml increased with volume of milk expressed at a single nursing. Healthy mothers in various stages of lactation ADULTS; MILK; CALCIUM; COPPER; MAGNESIUM; MINERALS; TRACE ELEMENTS; ZINC; LACTATION	Franzson, G.-B. Lonnerdal, B. 1982 Journal of Pediatrics 101(4):504-508

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Zinc
7440-66-6
Zn
AW 65.38, MP 419.5 C, BP 906 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0216 Milk	Ingestion	NA	21	0.4-9.6 ug/g	3.6 +or- 0.2 ug/g	Weekly samples, different foods on same day. 2-3 months beginning 15 days after childbirth. Healthy subjects, Italy ITALY; ADULTS; MILK; IN VITRO ANALYSIS; LACTATION; ANTIBODY; CERIUM; CHROMIUM; COBALT; IRON; MERCURY; RUBIDIUM; SCANDIUM; TRACE ELEMENTS; ZINC	Clemente, G.F. Ingrao, G. Santaroni, G.P. 1982 Science of the Total Environment 24:233-249
0217 Milk		AAS	35	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 7.14 +or- 1.32 ug/ml b) 5.91 +or- 0.72 ug/ml c) 5.36 +or- 1.60 ug/ml d) 5.90 +or- 1.12 ug/ml e) 5.49 +or - 0.73 ug/ml f) 3.93 +or- 0.70 ug/ml	a) Colostrum milk, mothers of preterm infants (28-34 wk gestation) b) Transitional milk, mothers of preterm infants (28-34 wk gestation) c) Mature milk, mothers of preterm infants (28-34 wk gestation) d) Colostrum milk, mothers of term infants (37-41 wk gestation) e) Transitional milk, mothers of term infants (37-41 wk gestation) f) Mature milk, mothers of term infants (37-41 wk gestation) Maternity ward, Ibadan, Nigeria NIGERIA; ADULTS; NUTRITIONAL DEFICIENCIES; MILK; COMPARATIVE EVALUATIONS; COPPER; IRON; ZINC; PREGNANCY	Atinmo, T. Omololu, A. 1982 Early Human Development 6:309-313
0218 Muscle		AAS	69	143-239 ug/g dry wt 10th and 90th percentile	178 ug/g dry wt Median	Skeletal muscle. Levels declined with age (Pearson correlation coefficient, r=-0.508, P<0.001). Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 64 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MAGNESIUM; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, H.E. Robinson, M.F. 1983 Biological Trace Element Research 5:103-115

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Zinc
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Zn
Atw 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 598 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0219 Pancreas		AAS	43	44.2-131 ug/g dry wt 10th and 90th percentile	89.0 ug/g dry wt Median	Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, R.E. Robinson, M.F. 1983 Biological Trace Element Research 4:105-115
0220 Pineal gland		NA	98	0.1x10(E-4)-5.11x10(E-4) g/g dry wt	19x10(E-5) g/g dry wt	Autopsies 20-24 hr after death. Mean 3.7 fold higher than means for 269 other areas of 7 brains. Levels estimated from graph, constant over wide range of fresh weights, not related to age, sex or body surface. 2-85 yr old males and females AUTOPSIES; PINEAL GLAND; BRAIN; COMPARATIVE EVALUATIONS; ANTIMONY; CESIUM; COBALT; IRON; RUBIDIUM; SELENIUM; ZINC	Dummel, U. Koch, A. Kasperek, K. Feinendegen, L.E. 1983 Science of the Total Environment 24:135-146
0221 Spleen		AAS	46	43.9-78.7 ug/g dry wt 10th and 90th percentile	61.4 ug/g dry wt Median	Autopsies within 24 hr 8 neonates (1-16 wk old), 3 infants (1-5 yr old), 44 adults (15-74 yr old). Deaths by accident, cardiovascular disease, respiratory disease, New Zealand RESPIRATORY DISEASES; NEW ZEALAND; ADULTS; AGE; AUTOPSIES; CHILDREN; INFANTS; SEX; CARDIOVASCULAR DISEASES; ADIPOSE TISSUE; AORTA; BONES; CARTILAGE; HAIR; HEART; KIDNEYS; LIVER; LUNGS; MUSCLES; PANCREAS; SPLEEN; CADMIUM; COPPER; MANGANESE; METALS; TRACE ELEMENTS; ZINC; POPULATION EXPOSURE	Casey, C.E. Guthrie, R.E. Robinson, M.F. 1983 Biological Trace Element Research 4:105-115

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Zinc
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Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0222 Sweat						Review. The structure and histogenesis of hair and nails are considered in relation to trace element incorporation and analytical problems. HAIR; NAILS; SWEAT; REVIEW; ALUMINUM; ARTIFACT; ARSENIC; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IODINE; IRON; LEAD; MAGNESIUM; MANGANESE; MERCURY; NICKEL; PHOSPHORUS; POTASSIUM; SCANDIUM; SELENIUM; SILVER; SODIUM; SULFUR; TITANIUM; TRACE ELEMENTS; VANADIUM; ZINC	Hoppe, H.C. 1974 Trace Substances in Environmental Health - VIII, D.D. Hemphill (Ed.), Proceedings of University of Missouri's 9th Annual Conference on Trace Substances in Environmental Health, June 11-13, 1974, (pp. 59-73).
0223 Urine	Ingestion	AAS	9	a) Not given b) Not given c) Not given	a) 0.78 +or- 0.28 mg/day b) 0.78 +or- 0.25 mg/day c) 0.73 +or- 0.43 mg/day	a) Daily intake: Zn 10.61 mg, Ca 789 mg, P 843 mg. Zn retention -1.36 +or- 0.81 mg/day b) Daily intake: Zn 10.63 mg, Ca 789 mg, P 2842 mg. Zn retention -1.32 +or- 1.95 mg/day c) Daily intake: Zn 10.66 mg, Ca 2382 mg, P 2443 mg. Zn retention -1.26 +or- 1.75 mg/day Composite samples for days 6-10 of 12-day period. College students, mean age 21.6 yr, ht 179 cm, wt 72 kg WISCONSIN; BLOOD PLASMA; BLOOD SERUM; URINE; COMPARATIVE EVALUATIONS; CALCIUM; COPPER; IRON; PHOSPHORUS; ZINC; DIETS	Snedeker, S.M. Smith, S.A. Gregor, J.L. 1982 Journal of Nutrition 112:136-143
0224 Urine	Injection Ingestion	Radiometry	17	a) 0.5-1.96 b) 0.05-0.76	a) Not given b) Not given	a) IV b) Oral Cumulative % of dose as Zn-65m, 6 hr-5 days after 50 uCi. Range of means estimated from graph. 21-73 yr olds (mean 51 yr), wt 44.6-96 kg (mean 69 kg) METABOLISM; RADIONUCLIDES; BLOOD PLASMA; DEUT; ERYTHROCYTES; LIVER; URINE; ZINC	Aamodt, R.L. Rumble, W.F. Johnston, G.S. Foster, D. Henkin, R.I. 1979 American Journal of Clinical Nutrition 32:559-569

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Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 906 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0225 Urine	Ingestion	AAS	8	a) Not given b) Not given	a) 0.6 +or- 0.1 mg/day b) 0.7 +or- 0.1 mg/day	a) Intake 13.5 mg Zn and 49.67 mg Zn/day, 20 days b) Intake 13.5 mg Zn and 0.11 mg Zn/day, 20 days Combined urinary/fecal losses show apparent retention of -2.8 mg/day for a) and -0.9 mg/day for b), a significant difference, $p < 0.01$ Healthy 21.0-28.8 yr olds, ht 168-192 cm, wt 69-83 kg WISCONSIN; ADULTS; BLOOD PLASMA; BLOOD SERUM; FECES; URINE; COMPARATIVE EVALUATIONS; COPPER; IRON; MAGNESIUM; MANGANESE; TIN; ZINC; DIETS; FOOD CONTAMINATION; METABOLISM; MINERAL METABOLISM	Johnson, M.A. Baier, M.J. Gregor, J.L. 1982 American Journal of Clinical Nutrition 35:1332-1338
0226 Urine	Ingestion		a) 1 b) 1	a) 1600-2600 ug/24 hr b) 1400-600 ug/24 hr	a) Not given b) Not given	a) 4 doses dimercaprol, IM, starting 4 hr after accident plus 24 mg/kg D-penicillamine every 6 hr (beginning at 16 hr), oral, 5 days b) 50 mg dimercaprol, IM, 4 hr after accident and 5 mg/kg every 4 hr to total 6 doses. 250 mg D-penicillamine every 6 hr (beginning at 16 hr), oral, 5 days 1 and 5 days following ingestion of unknown amount of rat poison containing As trioxide. Estimated from graph a) 4.5 yr old, 18 kg b) 6.75 yr old, 16.7 kg Navajo Indians CHELATES; COLORADO; CASE HISTORIES; CHILDREN; INFANTS; BLOOD; URINE; ARSENIC; COPPER; ZINC	Peterson, R.G. Rumack, B.H. 1977 Journal of Pediatrics 91(4):661-666

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Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8227 Urine	Ingestion	AAS	9	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.60 +or- 0.056 mg/day b) 0.71 +or- 0.056 mg/day c) 0.69 +or- 0.098 mg/day d) 0.60 +or- 0.050 mg/day e) 0.45 mg/day f) 0.69 mg/day S.E.	a) 3.80 mg/day organic Zn, 4 subjects b) 7.03 mg/day organic Zn, 4 subjects c) 9.76 mg/day organic Zn, 4 subjects d) 11.50 mg/day organic Zn, 4 subjects e) 7 mg from basal diet plus supplement of 1.4, 2.8, 5.6 or 0.4 mg as sulfate, 5 subjects f)3.00-11.50 mg/day organic Zn, 4 subjects 11 days at each intake level (7 stabilization, 4 collection). Healthy 24-31 yr olds, mean wt 50 kg INDIA; ADULTS; URINE; ZINC; DIETS	Nageswara Rao, C. Narasinga Rao, B.S. 1982 Nutrition Reports International 26(5):915-922

1,2-Benzenediol
120-80-9
C6-H6-O2
MW 110.11, MP 105 C, BP 245.5 C, VP 10 mm Hg at 118.3 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8228 Urine	Ingestion Inhalation	GC	a) 11 b) 7 c) 5	a) 1.2-30 mg/24 hr b) 2.5-5.9 mg/24 hr c) 4.4-11 mg/24 hr	a) 10 +or- 7.3 mg/24 hr b) 4.4 +or- 1.2 mg/24 hr c) 6.8 +or- 3.0 mg/24 hr	a) Nonsmokers, unrestricted diet b) Nonsmokers, restricted diet lacking fresh fruits, vegetables, coffee, tea, wine or fruit juices c) Smokers, unrestricted diet Healthy 20-56 yr olds, 55-77 kg. ADULTS; URINE; DIETS; SMOKING	Carmella, S.G. LaVoie, E.J. Hecht, S.S. 1982 Food and Chemical Toxicology 20:587-598

1,3-Benzenediamine, 4-methyl-
95-80-7
C7-H10-N2
MW 122.89, MP 99 C, BP 280 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0229 Urine	Dermal	Radiometry	3-6	Not given	23.7 +or- 16.1% of dose	Absorbed through skin after 6 ug/sq cm applied in acetone for 24 hr. Calculated from 5 day urinary excretion COSMETICS; INDUSTRIAL CHEMICALS; URINE	Norsulli, F.M. Anjo, D.M. Maibach, H.I. 1981 Food and Cosmetics Toxicology 19:743-747

1,3-Butadiene, 1,1,2,3,4,4-hexachloro-
87-68-3
C4-Cl6
MW 260.76, MP -21 C, BP 215 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0230 Adipose		GC TLC MS	99	a) 0.001-0.008 ug/g b) Not given c) Not given d) Not given e) Not given f) Not given Wet wt	a) 0.004 +or- 0.000 ug/g b) 0.004 +or- 0.000 ug/g c) 0.003 +or- 0.000 ug/g d) 0.003 +or- 0.000 ug/g e) 0.004 +or- 0.000 ug/g f) 0.004 +or- 0.000 ug/g Wet wt	a) 99 samples, 93% containing residues b) 53 samples, males c) 46 samples, females d) 0-25 yr olds, 33 samples e) 26-50 yr olds, 41 samples f) >50 yr olds, 24 samples Results showed erratic recoveries of 0-56% (mean <30%) Autopsies, accident victims, Canada, 1976 CANADA; ADULTS; AGE; AUTOPSIES; CHILDREN; SEX; ADIPOSE TISSUE; CHLORINATED HYDROCARBONS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LINDANE; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE	Mes, J. Davies, D.J. Turton, D. 1982 Bulletin of Environmental Contamination and Toxicology 28:97-104

1,3,4-Methano-1H-cyclobuta(cd)pentalene, 1,1a,2,2,3,3a,4,5,5,5a,5b,6-dodecachlorooctahydro-
2385-85-5
C10-C112
MW 545.6, MP 485 C, VP 6X10(E-6) mm Hg at 50 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8231 Adipose		GC MS	16	2-19 ppb	6ppb	Samples from eastern region and Quebec Autopsies, accident victims, Canada, 1976 CANADA; ADULTS; AGE; AUTOPSIES; CHILDREN; SEX; ADIPOSE TISSUE; CHLORINATED HYDROCARBONS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LINDANE; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE	Mes, J. Davies, D.J. Turton, D. 1982 Bulletin of Environmental Contamination and Toxicology 28:97-104
8232 Milk						Review. Breast milk contamination by chlorinated hydrocarbon insecticides and indus rial pollutants, U.S. and Canada. CALIFORNIA; CANADA; DISTRICT OF COLUMBIA; MICHIGAN; MISSISSIPPI; TENNESSEE; TEXAS; UNITED STATES; AGE; INFANTS; RACIAL STUDIES; MILK; REVIEW; ALDRIN; DDE; DDT; DIELDRIN; CHLORINATED HYDROCARBONS; HEPTACHLOR EPOXIDE; HEPTACHLOROCYCLOHEXANE; HEXACHLOROBENZENE; INSECTICIDES; LINDANE; OXYCHLORDANE; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; DIETS; FARMS; FOOD CONTAMINATION; FOODS; LACTATION; METABOLITES; RURAL AREAS; SMOKING; URBAN AREAS	Calabrese, E.J. 1981 Journal of the American College of Toxicology 1(3):91-98

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,endo- (8 CI)
2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)- (9 CI)
72-20-8
C12-H8-Cl6-O
MW 380.9, MP 240 C (decomp), also reported as 245 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0233 Milk		GC	2	Not given	<0.01 ug/g	Extractable lipid 2 of 15 samples positive 16-30 yr olds with infants 1-29 days old. Urban and rural areas, medium and low income levels, March 1976, Comarca, Mexico MEXICO; ADULTS; MILK; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; PESTICIDES; BIOACCUMULATION; LACTATION; METABOLITES; PESTICIDE RESIDUES; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Albert, L. Vega, P. Portales, A. 1981 Pesticides Monitoring Journal 15(3):135-138

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI)
2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0236 Adipose		GC TLC MS	99	a) 0.003 +or- 0.211 ug/g b) Not given c) Not given d) Not given e) Not given f) Not given Wet wt	a) 0.049 +or- 0.030 ug/g b) 0.050 +or- 0.026 ug/g c) 0.047 +or- 0.035 ug/g d) 0.033 +or- 0.010 ug/g e) 0.056 +or- 0.028 ug/g f) 0.059 +or- 0.039 ug/g Wet wt	a) 99 samples, all containing residues b) 53 samples, males c) 45 samples, females d) 0-20 yr olds, 33 samples e) 26-50 yr olds, 61 samples f) >50 yr olds, 24 samples Significant differences between d) and e), f) (P<0.05) Autopsies, accident victims, Canada, 1976 CANADA; ADULTS; AGE; AUTOPSIES; CHILDREN; SEX; ADIPOSE TISSUE; CHLORINATED HYDROCARBONS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LINDANE; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE	Moe, J. Davies, D.J. Turton, D. 1982 Bulletin of Environmental Contamination and Toxicology 28:97-104

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1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI)
2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (8 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0235 Adipose			300	Not given	0.04 mg/kg	Renal fat 35-60 yr olds, from White, Indian, and Black populations, 1960-69, South Africa SOUTH AFRICA; ADULTS; ADIPOSE TISSUE; MEASUREMENT METHODS; REVIEW; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; PESTICIDES; FISHES; FOODS; PESTICIDE RESIDUES	Van Dyk, L.P. Wiese, I.H. Mullen, J.B.C. 1982 Residue Reviews 83:30-124
0236 Blood, serum		GC	a) 7 b) 8 c) 9 d) 7	a) Not given b) Not given c) Not given d) Not given	a) 1.64 +or- 1.88 ppb b) 1.28 +or- 1.12 ppb c) 2.86 +or- 2.70 ppb d) 2.59 +or- 2.60 ppb	a) Controls, normal 2nd trimester pregnancies, no missed abortions b) Low serum PCB, recent missed abortions (mean 1.62) c) High serum PCB, recent missed abortions (mean 1.50) d) Former missed abortions (mean 3.43) In missed abortions, products of conception were retained in utero at least 6 wk after fetal death, which occurred before week 20 of gestation. Women with missed abortions (mean age 28.1 yr for high PCB group) and controls (mean age 24.7 yr) ADULTS; BLOOD SERUM; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; ENDOCYCICIDES; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; PREGNANCY	Recupero, S. Wassermann, M. Cucos, S. Ron, M. Wassermann, D. Pines, A. 1982 Environmental Research 30:168-176
0237 Blood, serum		GC GC	27	a) Not given b) Not given c) Not given d) Not given	a) 1.1 +or- 1.6 ppb b) 8.4 +or- 8.4 ppb c) 5.5 +or- 5.7 ppb d) 15.2 +or- 9.0 ppb	a) Normal 3rd-trimester pregnancies, 16 cases b) Premature deliveries, 17 cases c) 12 cases from b), total DDT <100 ppb d) 5 cases from b), total DDT >100 ppb Significant differences between a) and b), d) (p<0.01), a) and c) (p<0.05) BLOOD SERUM; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; HEPATOLITHS; PESTICIDE RESIDUES; PREGNANCY	Wassermann, M. Ron, M. Recupero, S. Wassermann, D. Cucos, S. Pines, A. 1982 Environmental Research 28:106-112

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1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI)
2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0230 Milk		GC	13	Not given	<0.01 ug/g	Extractable lipid 13 of 15 samples positive 16-30 yr olds with infants 1-20 days old. Urban and rural areas, medium and low income levels, March 1976, Comarca, Mexico MEXICO; ADULTS; MILK; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; PESTICIDES; BIOACCUMULATION; LACTATION; METABOLITES; PESTICIDE RESIDUES; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Albert, L. Vega, P. Portales, A. 1981 Pesticides Monitoring Journal 15(3):130-138
0239 Milk		GC-EC	10	Not given	0.030 +or- 0.030 ppm	Fat milk basis Samples from maternity hospitals, Tokyo metropolitan area, Sept.-Nov. 1980, Japan JAPAN; ADULTS; MILK; MEASUREMENT METHODS; DDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; INSECTICIDES; NONACHLOR; OXYCHLORDANE; PESTICIDES; LACTATION; PESTICIDE RESIDUES	Miyazaki, T. 1982 Bulletin of Environmental Contamination and Toxicology 28:566-569
0240 Milk						Review. Breast milk contamination by chlorinated hydrocarbon insecticides and industrial pollutants, U.S. and Canada. CALIFORNIA; CANADA; DISTRICT OF COLUMBIA; MICHIGAN; MISSISSIPPI; TENNESSEE; TEXAS; UNITED STATES; AGE; INFANTS; RACIAL STUDIES; MILK; REVIEW; ALDRIN; DDE; DDT; DIELDRIN; CHLORINATED HYDROCARBONS; HEPTACHLOR EPOXIDE; HEPTACHLOROCYCLOHEXANE; HEXACHLOROBENZENE; INSECTICIDES; LINDANE; OXYCHLORDANE; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; DIETS; FARMS; FOOD CONTAMINATION; FOODS; LACTATION; METABOLITES; RURAL AREAS; SMOKING; URBAN AREAS	Calabrese, E.J. 1982 Journal of the American College of Toxicology 1(3):81-98

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1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI)
2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8261 Milk		GC-EC	20	0-0.016 ppm	0.003 +or- 0.003 ppm	Samples in April-July 1981. Mean based on 45% of samples with residues >or= 0.001 ug/g Lactating mothers, Madrid, Spain SPAIN; MILK; COMPARATIVE EVALUATIONS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; MERCURY; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; LACTATION; PESTICIDE RESIDUES	Beluja, G. Hernandez, L.M. Gonzalez, M.J. Rico, M.C. 1982 Bulletin of Environmental Contamination and Toxicology 28:573-577

1alpha,2alpha,5alpha-Tropane-3beta-carboxylic acid, 3beta-hydroxy-, methyl ester, benzoate (ester) (8 CI)
8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 3-(benzoyloxy)-8-methyl-, methyl ester, (1R-(exo,exo))- (9 CI)
50-36-2
C17-H21-N-O4
MW 303.35, MP 98 C, BP 187-188 C at 0.1 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8262 Urine	Nasal mucosa	GC	10	a) 10-124 ug/ml b) 5-76 ug/ml c) 0-44 ug/ml d) 0-3 ug/ml e) 0-1 ug/ml f) 0 ug/ml	a) 47 +or- 38 ug/ml b) 27 +or- 23 ug/ml c) 10 +or- 13 ug/ml d) 1.0 +or- 1.0 ug/ml e) 0.3 +or- 0.3 ug/ml f) 0 ug/ml	a) 0-8 hr b) 8-16 hr c) 16-24 hr d) 0-8 hr e) 8-16 hr f) 16-24 hr Individual 8-hr specimens during initial 24 hr post-surgery. Dose, 280 mg as hydrochloride. a)-c) cocaine plus benzoylecgonine (metabolite) d)-f) cocaine only Patients receiving cocaine anesthesia for rhinoplastic or septoplastic surgery ADULTS; URINE; ANESTHETICS; DRUGS; MEASUREMENT METHODS; SURGERY	Wallace, J.E. Hamilton, H.E. King, R.B. Bacon, D.J. Schnoebelen, M.A. Harris, S.C. 1976 Analytical Chemistry 48(1):36-38

2-Butanone
/E-93-3
C4-H8-O
MW 160.27, BP 79.57 C, VP 71.2 mm Hg at 20 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8243 Urine	Inhalation	GC	62	0-3 mg/l	Not given	Air levels 0-85 ppm. Data subjected to regression analysis to give the linear relationship urinary level (ug/l) = 53.0+26.3 (air level, ppm). 31 workers in a printing roller production plant, and 31 employed in a printing plant JAPAN; URINE; MEASUREMENT METHODS; INDUSTRIAL ATMOSPHERES; INHALATION; OCCUPATIONAL HAZARDS; PRINTING INDUSTRY; INDUSTRIAL CHEMICALS; SOLVENTS	Hiyasaka, H. Kumai, H. Koizumi, A. Watanabe, T. Kurasako, K. Sato, K. Ikeda, M. 1982 International Archives of Occupational and Environmental Health 50:131-137

2-Pyridineacetamide, alpha-(2-(bis(1-methylethyl)amino)ethyl)-alpha-phenyl-, phosphate (1:1)
22059-60-5
C21-H29-N3-O.H3-O4-P
MW 437.53

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8244 Blood, serum						Review. Usefulness of serum levels of cardiac drugs in clinical practice. BLOOD SERUM; ANESTHETICS; ANTIARRHYTHMIC AGENTS; ANTIHYPERTENSIVE AGENTS; DIURETICS; DRUGS; STIMULANTS; REVIEW	Pennock, H.E. 1978 American Family Physician 17(4):190-196

2,4-Oxazolidinedione, 3,5,5-trimethyl-
127-48-0
C6-H9-N-O3
MW 143, MP 46-46.5 C, BP 78-80 C at 5 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8245 Blood, serum						Review. Assessment of clinical use of laboratory determinations for metals, anticonvulsive agents, and cardiovascular drugs. ADULTS; AGE; CHILDREN; ANEMIA; BONE DISEASES; DISEASES; MENTAL RETARDATION; METAL POISONING; NUTRITIONAL DEFICIENCIES; SKIN DISEASES; BLOOD; BLOOD PLASMA; BLOOD SERUM; LIVER; URINE; ANTIARRHYTHMIC AGENTS; ANTICONVULSANTS; DIURETICS; DRUG THERAPY; DRUGS; HYPNOTICS; MUSCLE RELAXANTS; SEDATIVES; TRANQUILIZERS; REVIEW; COPPER; DIAZEPAM; IRON; LEAD; LITHIUM; THEOPHYLLINES; ZINC; PAINTS	Weiss, H.B. Rosenthal, I.M. 1978 Journal of Analytical Toxicology 2:166-171

2',6'-Acetoxylidide, 2-(diethylamino)- (8 CI)
Acetamide, 2-(diethylamino)-N-(2,6-dimethylphenyl)- (9 CI)
137-58-6
C14-H22-N2-O
MW 234.33, MP 68-69 C, BP 180-181 C at 4 mm Hg, 159-160 C at 2 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8246 Blood, serum						Review. Usefulness of serum levels of cardiac drugs in clinical practice. BLOOD SERUM; ANESTHETICS; ANTIARRHYTHMIC AGENTS; ANTIHYPERTENSIVE AGENTS; DIURETICS; DRUGS; STIMULANTS; REVIEW	Peacock, W.S. 1978 American Family Physician 17(6):194-198

2H-1,4-Benzodiazepin-2-one, 5-(o-chlorophenyl)-1,3-dihydro-7-nitro- (8 CI)
2H-1,4-Benzodiazepin-2-one, 5-(2-chlorophenyl)-1,3-dihydro-7-nitro- (9 CI)
1622-61-3
C15-H10-Cl-N3-O3
MW 315.72, MP 236.5-238.5 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8267 Blood, serum						Review. Assessment of clinical use of laboratory determinations for metals, anticonvulsive agents, and cardiovascular drugs. ADULTS; AGE; CHILDREN; ANEMIA; BONE DISEASES; DISEASES; MENTAL RETARDATION; METAL POISONING; NUTRITIONAL DEFICIENCIES; SKIN DISEASES; BLOOD; BLOOD PLASMA; BLOOD SERUM; LIVER; URINE; ANTIARRHYTHMIC AGENTS; ANTICONVULSANTS; DIURETICS; DRUG THERAPY; DRUGS; HYPNOTICS; MUSCLE RELAXANTS; SEDATIVES; TRANQUILIZERS; REVIEW; COPPER; DIAZEPAM; IRON; LEAD; LITHIUM; THEOPHYLLINES; ZINC; PAINTS	Weiss, E.B. Rosenthal, I.M. 1978 Journal of Analytical Toxicology 2:166-171

3,5,6-Trichloropyridinol (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8268 Blood, plasma		CC GC-EC	a) 5 b) 4 c) 1 d) 1	a) 1.4-4.8 ppb b) 7.1-9.7 ppb c) Not applicable d) Not applicable	a) Not given b) Not given c) <1.0 ppb d) None detectable	a) Individuals with lowest plasma cholinesterase activity (2.53-3.78 um/min/ml) in group of 55 monitored for occupational exposure to chlorpyrifos (parent compound) b) Exposed individuals from same group. Plasma cholinesterase 3.29-4.87 um/min/ml c) Commercial pesticide operator d) Individual believed exposed at residence No significant depression of cholinesterase activity Healthy men BLOOD PLASMA; URINE; MEASUREMENT METHODS; CHLORINE ORGANIC COMPOUNDS; PENTACHLOROPHENOL; PESTICIDES; ENZYMES; METABOLITES; OCCUPATIONAL HAZARDS; PESTICIDE RESIDUES	Takei, G.H. Lee, H.H. 1981 Bulletin of Environmental Contamination and Toxicology 27:842-849

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3,5,6-Trichloropyridinol (No postings in CHEMLINE).

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8249 Urine		CC GC-EC	a) 5 b) 1 c) 1	a) 12-30 ppb b) Not applicable c) Not applicable	a) Not given b) 20 ppb c) None detectable	a) Individuals with lowest plasma cholinesterase activity (2.53-3.78 um/min/ml) in group of 55 monitored for occupational exposure to chlorpyrifos (parent compound) b) Commercial pesticide operator c) Individual believed exposed at residence Healthy men BLOOD PLASMA; URINE; MEASUREMENT METHODS; CHLORINE ORGANIC COMPOUNDS; PENTACHLOROPHENOL; PESTICIDES; ENZYMES; METABOLITES; OCCUPATIONAL HAZARDS; PESTICIDE RESIDUES	Tokei, G.N. Lee, H.H. 1981 Bulletin of Environmental Contamination and Toxicology 27:842-849

4-Amino-2-(4-butanoyl hexahydro-1H-1,4-diazepin-1-yl-6,7-dimethoxyquinazoline HCL (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8250 Blood, plasma	Ingestion	Fluorescence Spectrophotometry	6	30-2.4 ng/ml	Not given	1 and 8 hr after 4 mg. Level 20 ng/ml at 30 min. Range of means, estimated from graph. Healthy 23-35 yr olds, wt 60-70 kg BLOOD PLASMA; ANTIHYPERTENSIVE AGENTS; DRUGS	Yamato, C. Takahashi, T. Kinoshita, K. Fujita, T. 1982 Xenobiotica 12(9):549-559

4,7-Methano-1H-indene, 1,2,3,4,5,6,7,8,8-nonachloro-2,3,3a,4,7,7a-hexahydro-, (1alpha,2beta,3alpha,3aalpha,4beta,7beta,7aalpha)-
39765-80-5
C10-H5-Cl9
MW 444.33

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8251 Adipose		GC TLC MS	99	a) 0.015-0.244 ug/g b) Not given c) Not given d) Not given e) Not given f) Not given Wet wt	a) 0.056 +or- 0.032 ug/g b) 0.058 +or- 0.033 ug/g c) 0.054 +or- 0.030 ug/g d) 0.049 +or- 0.039 ug/g e) 0.059 +or- 0.024 ug/g f) 0.063 +or- 0.030 ug/g Wet wt	a) 99 samples, all containing residues b) 53 samples, males c) 45 samples, females d) 0-25 yr olds, 33 samples e) 26-50 yr olds, 41 samples f) >50 yr olds, 24 samples Autopsies, accident victims, Canada, 1976 CANADA; ADULTS; AGE; AUTOPSIES; CHILDREN; SEX; ADIPOSE TISSUE; CHLORINATED HYDROCARBONS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LINDANE; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE	Mes, J. Davies, D.J. Turton, D. 1982 Bulletin of Environmental Contamination and Toxicology 28:97-104
8252 Milk		GC-EC	10	Not given	0.010 +or- 0.011 ppm	Fat milk basis Samples from maternity hospitals, Tokyo metropolitan area, Sept.-Nov. 1980, Japan JAPAN; ADULTS; MILK; MEASUREMENT METHODS; DDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; INSECTICIDES; NONACHLOR; OXYCHLORDANE; PESTICIDES; LACTATION; PESTICIDE RESIDUES	Miyazaki, T. 1982 Bulletin of Environmental Contamination and Toxicology 29:566-569

4,7-Methanoindan, 1,2,4,5,6,7,8,8-octachloro-1,2-epoxy-3a,4,7,7a-tetrahydro- (8 CI)
2,5-Methano-2H-indeno(1,2-b)oxirene, 1a,2,3,4,5,6a,7,7-octachloro-1a,1b,5,5a,6,6a-hexahydro- (9 CI)
26880-48-8
C10-H4-Cl8-O
MW 423.77

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8253 Adipose		GC TLC NS	99	a) 0.005-0.186 ug/g b) Not given c) Not given d) Not given e) Not given f) Not given Wet wt	a) 0.055 +or- 0.026 ug/g b) 0.053 +or- 0.020 ug/g c) 0.057 +or- 0.033 ug/g d) 0.045 +or- 0.020 ug/g e) 0.056 +or- 0.024 ug/g f) 0.067 +or- 0.037 ug/g Wet wt	a) 99 samples, all containing residues b) 53 samples, males c) 45 samples, females d) 0-25 yr olds, 33 samples e) 26-50 yr olds, 41 samples f) >50 yr olds, 24 samples Significant increase in levels with age (P<0.05) Autopsies, accident victims, Canada, 1976 CANADA; ADULTS; AGE; AUTOPSIES; CHILDREN; SEX; ADIPOSE TISSUE; CHLORINATED HYDROCARBONS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LINDANE; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE	Mes, J. Davies, D.J. Turton, D. 1982 Bulletin of Environmental Contamination and Toxicology 28:97-104
8254 Milk		GC-EC	10	Not given	0.015 +or- 0.008 ppm	Fat milk basis Samples from maternity hospitals, Tokyo metropolitan area, Sept.-Nov. 1980, Japan JAPAN; ADULTS; MILK; MEASUREMENT METHODS; DDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; INSECTICIDES; NONACHLOR; OXYCHLORDANE; PESTICIDES; LACTATION; PESTICIDE RESIDUES	Miyazaki, T. 1982 Bulletin of Environmental Contamination and Toxicology 29:566-569
8255 Milk						Review. Breast milk contamination by chlorinated hydrocarbon insecticides and industrial pollutants, U.S. and Canada. CALIFORNIA; CANADA; DISTRICT OF COLUMBIA; MICHIGAN; MISSISSIPPI; TENNESSEE; TEXAS; UNITED STATES; AGE; INFANTS; RACIAL STUDIES; MILK; REVIEW; ALDRIN; DDE; DDT; DIELDRIN; CHLORINATED HYDROCARBONS; HEPTACHLOR EPOXIDE; HEPTACHLOROCYCLOHEXANE; HEXACHLOROBENZENE; INSECTICIDES; LINDANE; OXYCHLORDANE; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; DIETS; FARMS; FOOD CONTAMINATION; FOODS; LACTATION; METABOLITES; RURAL AREAS; SMOKING; URBAN AREAS	Calabrese, E.J. 1982 Journal of the American College of Toxicology 1(3):91-96

4,7-Methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI)
2,5-Methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.32

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0256 Adipose		GC TLC NS	99	a) 0.004-0.404 ug/g b) Not given c) Not given d) Not given e) Not given f) Not given Wet wt	a) 0.037 +or- 0.045 ug/g b) 0.035 +or- 0.028 ug/g c) 0.040 +or- 0.059 ug/g d) 0.021 +or- 0.000 ug/g e) 0.047 +or- 0.066 ug/g f) 0.042 +or- 0.024 ug/g Wet wt	a) 99 samples, all containing residues b) 53 samples, males c) 45 samples, females d) 0-25 yr olds, 33 samples e) 26-50 yr olds, 41 samples f) >50 yr olds, 24 samples Significant increase in levels with age (P<0.05) Autopsies, accident victims, Canada, 1976 CANADA; ADULTS; AGE; AUTOPSIES; CHILDREN; SEX; ADIPOSE TISSUE; CHLORINATED HYDROCARBONS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LINDANE; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE	Mes, J. Davies, D.J. Turton, D. 1982 Bulletin of Environmental Contamination and Toxicology 28:97-104
0257 Blood, serum		GC	a) 7 b) 8 c) 9 d) 7	a) Not given b) Not given c) Not given d) Not given	a) 4.50 +or- 1.77 ppb b) 4.00 +or- 2.37 ppb c) 3.80 +or- 2.93 ppb d) 2.49 +or- 0.48 ppb	a) Controls, normal 2nd trimester pregnancies, no missed abortions b) Low serum PCB, recent missed abortions (mean 1.62) c) High serum PCB, recent missed abortions (mean 1.50) d) Former missed abortions (mean 3.43) In missed abortions, products of conception were retained in utero at least 6 wk after fetal death, which occurred before week 20 of gestation. Women with missed abortions (mean age 28.1 yr for high PCB group) and controls (mean age 24.7 yr) ADULTS; BLOOD SERUM; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; PREGNANCY	Bercovici, B. Wassermann, M. Cucos, S. Ron, M. Wassermann, D. Pines, A. 1983 Environmental Research 30:169-174

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4,7-Methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI)
2,5-Methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.32

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0258 Blood, serum		CC GC	27	a) Not given b) Not given c) Not given d) Not given	a) 3.0 +or- 4.2 ppb b) 9.1 +or- 5.8 ppb c) 6.2 +or- 4.1 ppb d) 16.0 +or- 2.6 ppb	a) Normal 3rd-trimester pregnancies, 10 cases b) Premature deliveries, 17 cases c) 12 cases from b), total DDT <100 ppb d) 5 cases from b), total DDT >100 ppb b), d) Significant differences between a) and b), d) (p<0.01) BLOOD SERUM; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; LINDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; METABOLITES; PESTICIDE RESIDUES; PREGNANCY	Wassermann, M. Ron, M. Bercovici, B. Wassermann, D. Cucos, S. Pines, A. 1982 Environmental Research 28:106-112
0259 Milk		GC	7	Not given	<0.01 ug/g	Extractable lipid 7 of 15 samples positive 16-30 yr olds with infants 1-29 days old. Urban and rural areas, medium and low income levels, March 1976, Comarca, Mexico MEXICO; ADULTS; MILK; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; PESTICIDES; BIOACCUMULATION; LACTATION; METABOLITES; PESTICIDE RESIDUES; POPULATION EXPOSURE; RURAL AREAS; URBAN AREAS	Albert, L. Vega, F. Portales, A. 1981 Pesticides Monitoring Journal 15(3):135-138
0260 Milk						Review. Breast milk contamination by chlorinated hydrocarbon insecticides and industrial pollutants, U.S. and Canada. CALIFORNIA; CANADA; DISTRICT OF COLUMBIA; MICHIGAN; MISSISSIPPI; TENNESSEE; TEXAS; UNITED STATES; AGE; INFANTS; RACIAL STUDIES; MILK; REVIEW; ALDRIN; DDE; DDT; DIELDRIN; CHLORINATED HYDROCARBONS; HEPTACHLOR EPOXIDE; HEPTACHLOROCYCLOHEXANE; HEXACHLOROBENZENE; INSECTICIDES; LINDANE; OXYCHLORDANE; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; DIETS; FARMS; FOOD CONTAMINATION; FOODS; LACTATION; METABOLITES; RURAL AREAS; SMOKING; URBAN AREAS	Calabrese, E.J. 1982 Journal of the American College of Toxicology 1(3):91-98

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4,7-methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI)
2,5-methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.32

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8261 Milk		GC-EC	20	0-0.014 ppm	0.004 +or- 0.004 ppm	Samples in April-July 1981. Mean based on 77% of samples with residues >or= 0.001 ug/g Lactating mothers, Madrid, Spain SPAIN; MILK; COMPARATIVE EVALUATIONS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; MERCURY; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; LACTATION; PESTICIDE RESIDUES	Baluja, G. Hernandez, L.M. Gonzales, M.J. Rico, M.C. 1982 Bulletin of Environmental Contamination and Toxicology 28:573-577

9,10-Secocholesta-5,6,10(19)-triene-1alpha,3beta,25-triol (8 CI)
9,10-Secocholesta-5,7,10(19)-triene-1,3,25-triol, (1alpha,3beta,5E,7E)- (9 CI)
32222-06-3
C27-H44-O3
MW 416.65

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8262 Blood, serum		Competitive protein-binding	177	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 26 +or- 12 pg/ml b) 37 +or- 16 pg/ml c) 42 +or- 15 pg/ml d) 40 +or- 16 pg/ml e) 52 +or- 19 pg/ml f) 56 +or- 19 pg/ml g) 35 +or- 9 pg/ml h) 17 +or- 5 pg/ml	a) 1-5 yr olds, New York, 60 cases b) 1-5 yr olds, Madison, 20 cases c) 6-10 yr olds, New York, 18 cases d) 6-10 yr olds, Madison, 32 cases e) 11-16 yr olds, New York, 27 cases f) 11-16 yr olds, Madison, 20 cases g) 28 from group a), Pb <29 ug/dl h) 32 from group e), Pb >29 ug/dl Group e) significantly higher than a) or c) (p=0.05), f) significantly higher than b) or d) (p=0.05). Excluding levels >30 ug/dl, geographic location not significant. Negative correlation (r=-0.88) between serum 1,25-dihydroxycholecalciferol levels (10-52 pg/ml) and blood Pb levels (12-120 ug/dl) in 50, 2-3 yr olds, New York 1-6 yr olds, Madison, WI and New York, NY NEW YORK; WISCONSIN; ADOLESCENTS; AGE; CHILDREN; SEX; BLOOD; BLOOD SERUM; LEAD; METALS; VITAMIN D; INDUSTRIAL AREAS; POPULATION EXPOSURE	Mahaffey, K.R. Rosen, J.F. Chesney, R.W. Peeler, J.T. Smith, C.M. DeLuca, H.F. 1982 American Journal of Clinical Nutrition 35:1327-1331

9,10-Secocholesta-5,7,10(19)-triene-3beta,25-diol (8 CI)
9,10-Secocholesta-5,7,10(19)-triene-3,25-diol, (3beta,5E,7E)- (9 CI)
19356-17-3
C27-H44-O2
MW 400.65

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8263 Blood, serum			256	a) 5-28 ug/l b) 2.5-20.5 ug/l c) 2-19.5 ug/l d) 6.7-14.3 ug/l e) 6.5-11.6 ug/l f) 4.7-8.9 ug/l	a) 10.8 +or- 3.8 ug/l b) 8.9 +or- 3.5 ug/l c) 5.1 +or- 2.8 ug/l d) Not given e) Not given f) Not given	a) Europeans, 65 cases, March 1976 b) West Indians, 67 cases, March 1976 c) Asians, 124 cases, March 1976 d) Europeans, March & October 1976, 5 cases with initial level < 8 ug/l e) West Indians, March & October 1976, 14 cases with initial level < 8 ug/l f) Asians, March & October 1976, 34 cases with initial level < 8 ug/l Range a), b), and c) estimated from graph. 13 yr olds, similar wt, ht, sunlight exposure, and dietary intake ASIA; INDIA; UNITED KINGDOM; ADULTS; CHILDREN; RACIAL STUDIES; BONE DISEASES; BLOOD SERUM; CALCIUM; VITAMIN D; VITAMINS; DIETS; GENETIC EFFECTS	Ellis, G. Woodhead, J.S. Cooke, W.T. 1977 Lancet 1:825-828

(3,4'-Bipyridin)-6(1H)-one, 5-amino-
60719-84-8
C10-H9-N3-O
MW 187.22

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8264 Blood, serum	Ingestion	HPLC	6	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 1.26 +or- 0.30 ug/ml b) 1.00 +or- 0.14 ug/ml c) 0.87 +or- 0.11 ug/ml d) 0.71 +or- 0.09 ug/ml e) 0.62 +or- 0.10 ug/ml f) 0.61 +or- 0.09 ug/ml g) 0.58 +or- 0.10 ug/ml h) 0.39 +or- 0.09 ug/ml	a) 1 hr b) 2 hr c) 3 hr d) 4 hr e) 5 hr f) 6 hr g) 7 hr h) 8 hr Times after 100 mg dose 37-81 yr olds with moderately severe congestive heart failure ADULTS; HEART DISEASES; BLOOD SERUM; DRUGS	Benotti, J.R. Lesko, L.J. McCue, J.R. 1982 Journal of Clinical Pharmacology 22:425-432

DRUGS

Acetaldehyde
75-07-0
C2-H4-O
MW 44.05, MP -123.5 C, BP 20.8 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8265 Blood	Injection Ingestion	GLC	10	a) 23-10 nmol/ml b) 18-8 nmol/ml c) 26-8 nmol/ml	a) Not given b) Not given c) Not given	a) 37 and 230 min after 0.5 g/kg ethanol b) 75 and 285 min after 0.5 g/kg ethanol. Followed by 1.0 g moxalactam, IV c) 45 and 230 min after 0.5 g/kg ethanol preceded by 1.0 g moxalactam/8 hr, 4 doses, IV Estimated from graph Healthy Caucasians, 22-27 yr old No consistent moxalactam effect on ethanol or acetaldehyde elimination. 2 subjects experienced elevated blood acetaldehyde after moxalactum pretreatment. ANTIBIOTICS; COMPARATIVE EVALUATIONS; ALCOHOLS; ADULTS; BLOOD; DRUGS	Elenbaas, R.M. Ryan, J.L. Robinson, W.A. Singsank, M.J. Harvey, M.J. Klaasen, C.D. 1982 Clinical Pharmacology and Therapeutics 32(3):347-355

Acetamide, 2-(p-(2-hydroxy-3-(isopropylamino)propoxy)phenyl)- (8 CI)
Benzeneacetamide, 4-(2-hydroxy-3-((1-methylethyl)amino)propoxy)- (9 CI)
29122-68-7
C14-H22-N2-O3
MW 266.34, MP 146-148 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8266 Blood, Plasma	Ingestion	Fluorometry	6	a) Not given b) Not given c) Not given d) Not given	a) 242 +or- 20 ng/ml b) 144 +or- 16 ng/ml c) 222 +or- 19 ng/ml d) 207 +or- 23 ng/ml	a) 100 mg/day b) 100 mg/day with 1000 mg ampicillin c) 100 mg/day with 500 mg aspirin d) 100 mg/day with 300 mg allopurinol Steady state levels after 6 days Healthy 25-32 yr olds During exercise, blood prssures increased with atenolol plus ampicillin treatment. No pressure differences between monotherapy and combined treatments in patients at rest. ADULTS; HYPERTENSION; BLOOD PLASMA; ANTIHYPERTENSIVE AGENTS; COMPARATIVE EVALUATIONS; DRUGS	Schafer-Korting, M. Kirch, W. Axthelm, T. Kohler, H. Mutschler, E. 1983 Clinical Pharmacology and Therapeutics 33(3):203-208

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Acetamide, 2-(p-(2-hydroxy-3-(isopropylamino)propoxy)phenyl)- (8 CI)
Benzeneacetamide, 4-(2-hydroxy-3-((1-methylethyl)amino)propoxy)- (9 CI)
29122-68-7
C18-H22-N2-O3
MW 266.34, MP 146-148 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8267 Blood, plasma	Ingestion	Fluorometry	6	a) 2.5-0.95 ug/ml b) 1.2-0.85 ug/ml c) 0.8-0.24 ug/ml d) 0.4-0.17 ug/ml Range of means	a) Not given b) Not given c) Not given d) Not given	a) 2 and 8 hr after 400 mg b) 2 and 8 hr after 200 mg c) 2 and 8 hr after 100 mg d) 2 and 8 hr after 50 mg Estimated from graph Healthy 21-28 yr olds IRELAND; ADULTS; BLOOD PLASMA; ANTIHYPERTENSIVE AGENTS; DRUGS; COMPARATIVE EVALUATIONS	Salem, S.A. McDevitt, D.G. 1983 Clinical Pharmacology and Therapeutics 33(1):52-57

Acetamide, 2,2-dichloro-N-(beta-hydroxy-alpha-(hydroxymethyl)-p-nitrophenethyl)-, D-threo-(-)-, (8 CI)
Acetamide, 2,2-dichloro-N-(2-hydroxy-1-(hydroxymethyl)-2-(4-nitrophenyl)ethyl)-,(R-(R*,R*))- (9 CI)
56-75-7
C11-H12-Cl2-N2-O5
MW 323.14, MP 150.5-151.5 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8268 Blood, serum	Injection	HPLC	10	a) 22.9 - 101.6 ug/ml b) 20.7 - 75.4 ug/ml c) 16.9 - 51.4 ug/ml d) 13.9 - 49.1 ug/ml e) 1.8 - 27.0 ug/ml f) 1.0 - 17.7 ug/ml	a) 77.1 ug/ml b) 42.2 ug/ml c) 27.7 ug/ml d) 24.9 ug/ml e) 8.4 ug/ml f) 5.3 ug/ml	a) Chloramphenicol succinate. Peak, 1st study b) Peak, 2nd study c) Chloramphenicol. Peak, 1st study d) Peak, 2nd study e) Chloramphenicol. Trough, 1st study f) Trough, 2nd study Steady-state levels after 19-26 mg/kg/6 hr as succinate over 0.5-1 hr for 2 days. 2nd study 2-17 days after the 1st study. 0.38-17.15 yr olds, wt 6.6-52.8 kg with secondary infections. ADOLESCENTS; CHILDREN; INFANTS; INFECTION; BLOOD SERUM; ANTIBIOTICS; COMPARATIVE EVALUATIONS	Mehata, H.C. Powell, D.A. 1983 Clinical Pharmacology and Therapeutics 33(3):308-313

Acetanilide, 4'-hydroxy- (8 CI)
Acetamide, N-(4-hydroxyphenyl)- (9 CI)
103-90-2
C8-H9-N-O2
MW 151.16, MP 169-170.5 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8269 Blood, plasma	Ingestion	GC	7	a) 262-18 mg/l b) 265-12 mg/l c) 178-13 mg/l d) 150-38 mg/l e) 260-42 mg/l f) 149-10 mg/l g) 174-41 mg/l	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 14 and 27 hr after 30 g. 64 mg/l at 22 hr b) 16 and 31 hr after unknown dose. 120 mg/l at 26 hr c) 11.5 and 13 hr after 24 g. 81 mg/l at 16.5 hr d) 13 and 27 hr after unknown dose. 127 mg/l at 21 hr e) 14 and 20 hr after 50 g. 256 mg/l at 18 hr f) 24 and 31 hr after 75 g. 100 mg/l at 26 hr g) 24.5 and 33 hr after 30 g 177 mg/l at 29 hr Trough levels after 5-hr charcoal hemoperfusion Overdose cases, United Kingdom Liver damage, 1 death BLOOD PLASMA; LIVER; DRUG ABUSE; UNITED KINGDOM; ADULTS; CASE HISTORIES; LIVER; DRUGS; DISEASES	Halliwell, M. Essex, H. 1981 Clinical Toxicology 18(10):1229-1233
8270 Blood, plasma	Injection	HPLC	2	a) 34-0.75 ug/l b) 42-0.3 ug/l	a) Not given b) Not given	a) 26 yr old subject b) 60 yr old subject Initial measurements and 12 hr after 650 mg. Estimated from graph Healthy subjects BLOOD PLASMA; ANALGESICS; ANTIPYRETICS; ADULTS; DRUGS	Divoll, M. Abernethy, D.R. Amoor, B. Greenblatt, D.J. 1982 Clinical Pharmacology and Therapeutics 31(2):151-156
8271 Blood, plasma	Ingestion		11	a) Not applicable b) Not applicable c) Not applicable d) >140 ug/ml->24 ug/ml	a) 114 ug/ml b) 35 ug/ml c) 222 ug/ml d) Not given	a) 13 yr old girl, 7 hr after ingesting toxic quantity b) After 3 hr treatment with 2% acrylic hydrogel-coated charcoal hemoperfusion. Estimated from graph c) 20 yr old man, 9 hr after ingesting toxic quantity d) 9 high-risk patients, 10 and 24 hr after ingestion. One died after therapy at 16.5-29 hr Of 46 other patients without hemoperfusion therapy, 10 died. Washington, DC and United Kingdom SUICIDE; BLOOD PLASMA; ANALGESICS; ANTIPYRETICS; DRUG ABUSE; DRUGS; HEMODIALYSIS; REVIEW	Winchester, J.F. Golfend, N.C. Halliwell, M. Vale, J.A. Goulding, R. Schreiner, G.E. 1981 Archives of Internal Medicine 141:370-374

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Acetanilide, 4'-hydroxy- (8 CI)
Acetamide, N-(4-hydroxyphenyl)- (9 CI)
103-90-2
C8-H9-N-O2
MW 151.16, MP 169-170.5 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8272 Blood, plasma	Injection	HPLC	a) 1 b) 1 c) 1 d) 1	a) 12-0.6 ug/ml b) 36-0.4 ug/ml c) 23-0.4 ug/ml d) 12-0.10 ug/ml	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) Female, normal wt. Initial level and at 12 hr b) Male, normal wt. Initial level and 12 hr after dose c) Male, normal wt. Initial level and at 13 hr d) Obese male. Initial level and at 12 hr Dose 650 mg IV infusion. Data on 42 other subjects showed distribution and clearance significantly increased in obese subjects. Healthy men (24 and 36 yr old), woman (26 yr old), all normal wt and obese man (36 yr old). ADULTS; SEX; BLOOD PLASMA; ANALGESICS; COMPARATIVE EVALUATIONS; DRUGS	Abernethy, D.R. Divoll, M. Greenblatt, D.J. Ameer, B. 1982 Clinical Pharmacology and Therapeutics 31(6):783-790
8273 Blood, plasma	Ingestion		1	a) Not applicable b) Not applicable	a) 959 mg/l b) 67 mg/l	a) 11.5 hr after 75 g b) 23 hr after 75 g N-acetylcysteine infusion begun at 13 hr. Charcoal hemoperfusion at 14.5 hr and continued for 8.5 hr 56 yr old Unconsciousness, absence of pain and oculocephalic responses, pallor, tachypnea, arm flexor spasm, areflexia, ventricular tachycardia Minor hepatic damage UNITED KINGDOM; ADULTS; BLOOD PLASMA; URINE; DRUG ABUSE; DRUGS; METABOLITES	Berzulka, A. Wright, N. 1982 British Medical Journal 285:851-852
8274 Blood, plasma	Ingestion	GC	17	Not given	189 +or- 24 ug/ml	8.6 +or- 1.5 hr after overdoses. Doses not reported 18-49 yr olds with acute hepatic necrosis from paracetamol overdosage SCOTLAND; AGE; LIVER DISEASES; BLOOD PLASMA; DRUG ABUSE; DRUG INTERACTION; DRUGS; ALCOHOLIC BEVERAGES; METABOLISM	Forrest, J.A.H. Roscoe, P. Prescott, L.F. Stevenson, I.H. 1974 British Medical Journal 4(5943):499-502

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Acetanilide, 4'-hydroxy- (8 CI)
Acetamide, N-(4-hydroxyphenyl)- (9 CI)
103-90-2
C8-H9-N-O2
MW 151.16, MP 169-170.5 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8275 Urine	Ingestion		1	Not applicable	22.8 g	Glucuronide and sulfate derivatives plus free paracetamol, total excretion 12-23 hr after 75g 56 yr old UNITED KINGDOM; ADULTS; BLOOD PLASMA; URINE; DRUG ABUSE; DRUGS; METABOLITES	Rezulka, A. Wright, N. 1982 British Medical Journal 285:851-852
8276 Urine	Ingestion	HPLC	29	a) 1.5-4.9% b) 41.2-71.5% c) 23.8-55.9% d) 1.2-4.3% e) 26.1-66.1% f) 20.5-52.8%	a) 2.8 +or- 0.2% b) 55.7 +or- 1.5% c) 41.5 +or- 1.5% d) 2.3 +or- 0.1% e) 46.9 +or- 1.7% f) 35.0 +or- 1.5%	a) After 10 mg/kg b) Glucuronide metabolite after 10 mg/kg c) Sulfate metabolite after 10 mg/kg d) After 10 mg/kg e) Glucuronide metabolite after 10 mg/kg f) Sulfate metabolite after 10 mg/kg 24 hr excretion a)-c) % total excretion, d)-f) % dose 22.2 +or- 2.5-30.9 +or- 5.9 yr old healthy subjects URINE; ANALGESICS; ANTIPYRETICS; COMPARATIVE EVALUATIONS; ADULTS; DRUGS	Reiter, C. Heinzelbaum, R. 1982 Clinical Pharmacology and Therapeutics 32(5):612-621

Aluminum
7429-90-5
Al
AtW 26.98154, MP 660 C, BP 2327 C, VP 1 mm Hg at 1540 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8277 Blood, plasma		AAS		a) 3-39 ug/l b) 16-63 ug/l c) <or= 930 ug/l d) <or= 200 ug/l	a) Not given b) Not given c) Not given d) Not given	a) 54 healthy subjects b) 12 patients with slight renal failure c) Dialysis patients on oral Al therapy d) Dialysis patients on less soluble Al antacids KIDNEY DISEASES; BLOOD PLASMA; ANTACIDS; DRUG THERAPY; DRUGS; HEMODIALYSIS; MEASUREMENT METHODS; ALUMINUM; METALS	Wawschinek, O. Petek, W. Lang, J. Pogglitsch, H. Holzer, H. 1982 Mikrochimica Acta 1:335-339

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Aluminum
7429-90-5
Al
AtW 26.98154, MP 660 C, BP 2327 C, VP 1 mm Hg at 1540 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8278 Blood, plasma	Ingestion	AAS	a) 17 b) 6	a) 8-18 ug/l b) 8-17 ug/l	a) 8.41 ug/l b) 6.50 ug/l	a) 1.5 and 3.5 hr after 1 g sucralfate (Al salt of sucrose sulfate) 4X/day, 8-10 wk b) Controls Patients with gastric and/or duodenal ulcers and controls. BLOOD PLASMA; COMPARATIVE EVALUATIONS; ALUMINUM	Kinoshita, H. Kumaki, K. Nakano, H. Tsuyuma, K. Nagashima, R. Okada, M. McGraw, B. 1982 Research Communications in Chemical Pathology and Pharmacology 35(3):515-518
8279 Blood, plasma			41	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 58.63 +or- 41.33 ug/l b) 25.35 +or- 17.01 ug/l c) 85.81 +or- 48.58 ug/l d) 36.77 +or- 26.18 ug/l e) 191.87 +or- 78.71 ug/l f) 59.15 +or- 47.36 ug/l g) 107.33 +or- 56.29 ug/l h) 40.23 +or- 31.88 ug/l	a) Before perfusion, chronic hepatitis patients b) Before perfusion, controls c) After perfusion, chronic hepatitis patients d) After perfusion controls e) 48-72 hr after perfusion, and before hemodialysis, chronic hepatitis patients f) 48-72 hr after perfusion and before hemodialysis, controls g) After hemodialysis, chronic hepatitis patients h) After hemodialysis, controls Perfusion of 2 g desferrioxamine. Patients received Al gels 6-168 mo Hemodialysis patients, 15 with chronic hepatitis and 26 noninfected controls. At risk for Al intoxication. BLOOD PLASMA; DRUG INTERACTION; HEMODIALYSIS; ALUMINUM; METALS; DRUGS	Simon, P. Aag, K.S. Tanguerel, T. Allain, P. Mauras, Y. 1982 La Nouvelle Presse Medicale 11(3):209

Ammonium, (o-bromobenzyl)ethyldimethyl-, p-toluenesulfonate (8 CI)
Benzenemethanaminium, 2-bromo-N-ethyl-N,N-dimethyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9 CI)
61-75-6
C11-H17-Br-N.C7-H7-O3-S
MW 414.4, MP approx 98 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8200 Blood, plasma	Injection	GC	5	0.80-2.37 ug/ml	1.4 ug/ml	Average maxima after 2 or 4 mg/kg IV at 5 mg/min. Lower dose to patients with creatinine clearance <30 ml/min x 1.73 sq m. Monobase renally impaired patients, 26-63 yr old ADULTS; KIDNEY DISEASES; BLOOD PLASMA; URINE; DRUGS; COMPARATIVE EVALUATIONS; ANTIARRHYTHMIC AGENTS	Josselson, J. Harang, P.K. Adir, J. Yacobi, A. Sadler, J.H. 1983 Clinical Pharmacology and Therapeutics 33(2):144-150
8201 Urine	Injection	GC	5	a) 0.1-69.6% of dose b) 0.1-86.5% of dose c) 0.2-88.2% of dose	a) 28.0% of dose b) 37.2% of dose c) 39.1% of dose	a) 24 hr after dose b) 72 hr after dose c) 192 hr after dose Dose: 2 or 4 mg/kg IV at 5 mg/min. Lower dose to patients with creatinine clearance <30 ml/min x 173 sq m. Monobase renally impaired patients, 26-63 yr old Resistance related to excessive protein binding, erythrocyte abnormality, alterations in metabolite levels, reduced beta receptor number, and postreceptor abnormalities. ADULTS; KIDNEY DISEASES; BLOOD PLASMA; URINE; DRUGS; COMPARATIVE EVALUATIONS; ANTIARRHYTHMIC AGENTS	Josselson, J. Harang, P.K. Adir, J. Yacobi, A. Sadler, J.H. 1983 Clinical Pharmacology and Therapeutics 33(2):144-150

Aniline, 4,4'-sulfonyldi- (8 CI)
Benzenamine, 4,4'-sulfonylbis- (9 CI)
80-08-0
C12-H12-N2-O2-S
MW 248.30, MP 175-176 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8282 Blood, serum		HPLC	2	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 1622 ng/ml b) 744 ng/ml c) 439 ng/ml d) 284 ng/ml	a) Unchanged drug, mother 6 wk postpartum, on daily dose of 50 mg b) Monoacetyldapsone (metabolite) c) Unchanged drug, 6 wk old infant of a) d) Monoacetyldapsone Infant exposed from breast milk 25 yr old on dapsone for dematitis herpatiformis and her 6 wk old infant Both subjects had mild hemolytic anemia ANEMIA; LACTATION; METABOLITES; PREGNANCY; SKIN DISEASES; BLOOD SERUM; UTAH; ADULTS; INFANTS; DERMATITIS; DRUGS	Sanders, E.W. Zone, J.J. Goltz, R.L. Tolman, K.G. Rollins, D.E. 1982 Annals of Internal Medicine 96(4):465-466
8283 Milk		HPLC	1	Not given	1092 ng/ml	Daily dose of 50 mg during pregnancy. Measured 6 wk postpartum. 25 yr old with multiple pruritic papules, onset at age 14 Mild hemolytic anemia ANEMIA; LACTATION; METABOLITES; PREGNANCY; SKIN DISEASES; BLOOD SERUM; UTAH; ADULTS; INFANTS; DERMATITIS; DRUGS	Sanders, E.W. Zone, J.J. Goltz, R.L. Tolman, K.G. Rollins, D.E. 1982 Annals of Internal Medicine 96(4):465-466

Anthranilic acid, N-2,3-xylyl- (8 CI)
Benzoic acid, 2-((2,3-dimethylphenyl)amino)- (9 CI)
61-68-7
C15-H15-N-O2
MW 241.28, MP 230-231 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8284 Blood, serum	Ingestion	HPLC	1	a) Not applicable b) Not applicable c) Not applicable	a) 21.3 g b) 3.8 g c) 0 g	a) At 4 hr b) At 10 hr c) At 22 hr 5-10 g dose. Estimated from graph 13 hr old, no history of epilepsy Nausea, fatigue, coma, muscle twitching, convulsions EUROPE; ADOLESCENTS; BLOOD SERUM; DRUG ABUSE; DRUGS	Gessinger, M. Kruby, K. Haubenstock, A. Jung, H. Kwerina, M. 1982 Lancet 2(8294):304

Anthranilic acid, 4-chloro-N-furfuryl-5-sulfamoyl- (2 CI)
Benzoic acid, 5-(aminosulfonyl)-4-chloro-2-((2-furanylmethyl)amino)- (9 CI)
54-31-9
C12-H11-Cl-N2-O5-S
MW 330.77, MP 206 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8285 Blood	Ingestion	GLC	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1 g) 1	a) 884-1692 ng/ml b) 1392-939 ng/ml c) 1030-960 ng/ml d) 1350-1359 ng/ml e) 1379-1290 ng/ml f) 3153-1606 ng/ml g) 755-687 ng/ml	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 25 mg, 3X/day b) 25 mg, 3X/day c) 50 mg, 3X/day d) 25 mg, 2X/day e) 25 mg, 3X/day f) 75 mg, 3X/day g) 25 mg, 3X/day Levels 1 and 3 hr after oral dose. 5-14 yr olds with chronic renal failure, 5 hr hemodialysis 3X/wk KIDNEY DISEASES; BLOOD; CHILDREN; URINE; DIURETICS; HEMODIALYSIS	Riva, E. Fossali, E. Battinelli, A. 1982 European Journal of Clinical Pharmacology 21:303-306
8286 Blood, plasma	Injection		8	a) 5.1-0.3 ug/ml b) 5.0-0.3 ug/ml	a) Not given b) Not given	a) 5 and 300 min after 40 mg b) 5 and 300 min after 40 mg plus 0.2 mg/kg hydralazine Range of means, estimated from graph Congestive heart failure patients, mean age 51 yr ADULTS; HEART DISEASES; BLOOD PLASMA	[illegible], A. Yasuda, H. Kotoh, K. Akimoto, T. Miyazaki, H. Arita, T. 1982 Clinical Pharmacology and Therapeutics 32(3):303-306

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Anthranilic acid, 4-chloro-N-furfuryl-5-sulfamoyl- (8 CI)
Benzoic acid, 5-(aminosulfonyl)-4-chloro-2-((2-furanylmethyl)amino)- (9 CI)
54-31-9
C12-H11-Cl-N2-O5-S
MW 330.77, MP 266 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0287 Blood, plasma	Injection	GLC	a) 7 b) 6	a) 7-0.05 ug/ml b) 7-0.03 ug/ml	a) Not given b) Not given	a) Controls at 0 and 320 min b) Patients at 0 and 270 min 40 mg IV Patients with severe nephrotic syndrome and controls, age 20-66 yr DIURETICS; COMPARATIVE EVALUATIONS; ADULTS; KIDNEY DISEASES; DRUGS	Keller, E. Hoppe-Seyler, G. Schollmeyer, P. 1982 Clinical Pharmacology and Therapeutics 32(4):462-469
0288 Urine	Injection	GC	7	a) Not given b) Not given c) Not given d) Not given	a) 313.5 +or- 191.1 ug b) 713.2 +or- 198.6 ug c) 1,259.8 +or- 196.2 ug d) 1,746 +or- 358.4 ug	a) 1 hr. 11.1% of dose b) 6 hr. 34.0% of dose. 55% parent compound, 23.3% glucuronide metabolite and 21.2% acid metabolite c) 12 hr. 70.1% of dose d) 24 hr. 84.4% of dose Total excreted after 1 mg/kg dose. Acid metabolite excretion inversely related to that of parent compound and glucuronide metabolite. Newborns (mean wt 2.1 kg mean gestational age 32.8 wk, mean postnatal age 19.8 days) with fluid overload states. NEWBORN; URINE; DIURETICS; DRUG THERAPY; DRUGS	Aranda, J.V. Lambert, C. Perez, J. Turmen, T. Sitar, D.S. 1982 Pediatric Pharmacology and Therapeutics 101(5):777-781

Antipyrine (8 CI)
1H-Pyrazol-3-one, 1,2-dihydro-1,5-dimethyl-2-phenyl- (9 CI)
60-80-0
C11-H12-N2-O
MW 188.22, MP 111-113 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0289 Milk	Ingestion	GC	7	0.25-1.07% of dose	0.59 +or- 0.28% of dose	% of maternal dose available to infant/ nursing 90 ml/4 hr. Dose, 10 mg/kg. Healthy 26-32 yr olds, lactating 2-19 mo. No smoking, alcohol, and on no other drugs. MILK; SALIVA; ANTIPYRETICS; COMPARATIVE EVALUATIONS; PENNSYLVANIA; ADULTS; DRUGS	Berlin, C.M., Jr. Yesell, E.S. 1982 Clinical Pharmacology and Therapeutics 31(1):36-44

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Antipyrine (8 CI)
3H-Pyrazol-3-one, 1,2-dihydro-1,5-dimethyl-2-phenyl- (9 CI)
60-80-0
C11-H12-N2-O
MW 188.22, MP 111-113 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8298 Saliva	Ingestion	GC	7	31-2 ug/ml	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	2 and 25 hr after single dose of 18 mg/kg. Levels closely approximated those in milk. Estimated from graphs. Healthy 26-32 yr olds, lactating 2-19 mo. No smoking, alcohol, and on no other drugs. MILK; SALIVA; ANTIPYRETICS; COMPARATIVE EVALUATIONS; PENNSYLVANIA; ADULTS; DRUGS	Berlin, C.M., Jr. Vesell, E.S. 1982 Clinical Pharmacology and Therapeutics 31(1):38-44
8291 Urine	Ingestion	HPLC		a) 25-70% b) 50-65% c) 30-65%	a) 52 +or- 17% b) 59 +or- 5% c) 50 +or- 11%	a) 3-hydroxymethylantipyrine (HMA) metabolite, excreted over 48 hr after 500 mg antipyrine. Male controls b) HMA excreted over 48 hr after 500 mg antipyrine. Female controls c) HMA excreted over 48 hr after 500 mg antipyrine. Females using low-dose oral contraceptive combination pills (0.15 mg levonorgestrel and 0.030 ethinylestradiol) for at least 6 mo Tests on day 5 and 6 of menstrual cycle in b) and c). University students, Caucasian, 23.1 +or- 1.7 yr old, wt 61.0 +or- 9.2 kg and controls NETHERLANDS; ADULTS; URINE; DRUGS; ORAL CONTRACEPTIVES; COMPARATIVE EVALUATIONS	Tenniesen, M.W.H. Srivastava, A.K. Breimer, D.D. 1982 Clinical Pharmacology and Therapeutics 32(2):240-246

Barbituric acid, 5-(1-cyclohexen-1-yl)-5-ethyl- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-(1-cyclohexen-1-yl)-5 ethyl- (9 CI)
52-31-3
C12-H16-N2-O3
MW 236.26, MP 171-174 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8292 Blood, plasma		GC	1	Not applicable	142 ug/ml	Maximum level after overdose, dose not reported. 30 hr coma. 49 yr old addict, Edinburgh, Scotland SCOTLAND; AGE; LIVER DISEASES; BLOOD PLASMA; DRUG ABUSE; DRUG INTERACTION; DRUGS; ALCOHOLIC BEVERAGES; METABOLISM	Forrest, J.A.H. Roscoe, P. Prescott, L.F. Stevenson, I.H. 1976 British Medical Journal 4(5943):499-502

Barbituric acid, 5-allyl-5-(1-methylbutyl)- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-(1-methylbutyl)-5-(2-propenyl)- (9 CI)
76-73-3
C12-H18-N2-O3
MW 334

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8293 Blood, plasma	Ingestion	GC	6	a) 2.6-0.2 ug/ml b) 2.4-0.3 ug/ml c) 2.8-0.3 ug/ml	a) Not given b) Not given c) Not given	a) 1 and 72 hr after 150 mg/70 kg and placebo cigarette. Initial measurement 0.3 ug/ml at 0.25 hr b) 1 and 72 hr after 150 mg/70 kg and 150 ug/kg cannabidiol cigarette. Initial measurement 0.2 ug/ml at 0.25 hr c) 1 and 72 hr after 150 mg/70 kg and 500 ug/kg cannabidiol cigarette. Initial measurement 0.1 ug/ml at 0.25 hr Estimated from graph. At acute doses administered, cannabidiol did not alter secobarbitol disposition. Healthy 21-24 yr olds. CANNABIDIOL; BARBITURATES; BLOOD PLASMA; DRUG ABUSE; DRUG INTERACTION; COMPARATIVE EVALUATIONS; ADULTS	Dalton, W.S. Hartz, R. Hodda, B.H. Lemberger, L. Forney, R.B. 1976 Clinical Pharmacology and Therapeutics 20(6):695-700
8294 Blood, plasma		GC	5	13-67 ug/ml	Not given	Maximum levels after drug overdoses. 33-80 hr comas. Doses not reported 22-43 yr olds, Edinburgh, Scotland SCOTLAND; AGE; LIVER DISEASES; BLOOD PLASMA; DRUG ABUSE; DRUG INTERACTION; DRUGS; ALCOHOLIC BEVERAGES; METABOLISM	Forrest, J.A.H. Roscoe, P. Prescott, L.F. Stevenson, I.H. 1976 British Medical Journal 4(5943):499-502

Barbituric acid, 5-ethyl-5-(1-methylbutyl)- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-(1-methylbutyl)- (9 CI)
76-74-4
C11-H18-N2-O3
MW 226.31

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8295 Blood, plasma		GC	2	26-27 ug/ml	Not given	Maximum levels after drug overdoses. 27 and 43 hr comas. Doses not reported 26 and 69 yr olds, Edinburgh, Scotland SCOTLAND; AGE; LIVER DISEASES; BLOOD PLASMA; DRUG ABUSE; DRUG INTERACTION; DRUGS; ALCOHOLIC BEVERAGES; METABOLISM	Forrest, J.A.H. Roscoe, P. Prescott, L.F. Stevenson, I.H. 1976 British Medical Journal 4(5943):499-502
8296 Blood, serum	Injection	GC	1	a) 12-18 mg/l b) 22-24 mg/l c) 28-30 mg/l d) 20-30 mg/l e) 30-3 mg/l	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) From 0-2 hr, during 75 mg/hr loading infusion b) From 15-30 hr, during 19.5 mg/hr maintenance infusion c) From 30-31 hr, during 150 mg/hr bolus d) From 50-70 hr, during 28.2 mg/hr maintenance infusion e) From 70-140 hr, after therapy Estimated from graph 9 yr old Reyes syndrome patient REYE'S SYNDROME; BLOOD SERUM; CEREBROSPINAL FLUID; ANESTHETICS; DRUG THERAPY; DRUGS; PENNSYLVANIA; CHILDREN; NERVOUS SYSTEM DISEASES	Schaible, D.H. Cupit, G.C. Swedlow, D.B. Rocci, M.L., Jr. 1982 Journal of Pediatrics 100(4):655-660

Barbituric acid, 5-ethyl-5-isopentyl- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-(3-methylbutyl)- (9 CI)
57-43-2
C11-H18-N2-O3
MW 226.27, MP 156-158 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8297 Blood, plasma		GC	6	16-76 ug/ml	Not given	Range of maximum levels following drug overdose. Dose not reported 22-67 yr olds, Edinburgh, Scotland SCOTLAND; AGE; LIVER DISEASES; BLOOD PLASMA; DRUG ABUSE; DRUG INTERACTION; DRUGS; ALCOHOLIC BEVERAGES; METABOLISM	Forrest, J.A.H. Roscoe, P. Prescott, L.F. Stevenson, I.H. 1976 British Medical Journal 4(5943):499-502

Barbituric acid, 5-ethyl-5-phenyl- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-phenyl- (9 CI)
50-06-6
C12-H12-N2-O3
MW 232.23, MP 174-178 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8298 Blood, serum	Nasogastric tube		a) 1 b) 1	a) 141-25 ug/ml b) 107-23 ug/ml	a) Not given b) Not given	a) 22 yr old woman, 0 and 60 hr after admission. 6 doses, 40 g activated charcoal (4 hr intervals) plus Na sulfate and Mg citrate b) 22 yr old man, 0 and 60 hr after admission. 6 doses, 30 g activated charcoal at 6 hr, then 6 hr intervals. Na-sulfate also given. Phenobarbital overdose patients with histories of seizures and schizophrenia At admission: Woman was comatose, responsive to painful stimuli, man was minimally responsive to verbal stimuli, combative. BLOOD SERUM; DRUGS; SEDATIVES; LAVAGE; IOWA; ADULTS; CASE HISTORIES; DRUGS	Goldberg, M.J. Berlinger, W.G. 1982 Journal of the American Medical Association 247(17):2400-2401
8299 Blood, serum						Review. Assessment of clinical use of laboratory determinations for metals, anticonvulsive agents, and cardiovascular drugs. ADULTS; AGE; CHILDREN; ANEMIA; BONE DISEASES; DISEASES; MENTAL RETARDATION; METAL POISONING; NUTRITIONAL DEFICIENCIES; SKIN DISEASES; BLOOD; BLOOD PLASMA; BLOOD SERUM; LIVER; URINE; ANTIARRHYTHMIC AGENTS; ANTICONVULSANTS; DIURETICS; DRUG THERAPY; DRUGS; HYPNOTICS; MUSCLE RELAXANTS; SEDATIVES; TRANQUILIZERS; REVIEW; COPPER; DIAZEPAM; IRON; LEAD; LITHIUM; THEOPHYLLINES; ZINC; PAINTS	Weiss, H.B. Rosenthal, I.M. 1978 Journal of Analytical Toxicology 2:166-171
8300 Blood, serum	Injection	GC/MS	1	a) 2.5-0.17 ug/ml b) 2.4-0.17 ug/ml	a) Not applicable b) Not applicable	a) Initial measurement and at 14 days after dose b) Same as a), stable-isotope-labelled drug Dose was 90 mg of sodium phenobarbital and 90 mg sodium C-13, (N-15)2-phenobarbital by IV infusion. No significant difference. Estimated from graph. BLOOD SERUM; COMPARATIVE EVALUATIONS; DRUGS; MEASUREMENT METHODS	Browne, T.R. Van Langenhove, A. Costello, C.E. Biemann, K. Greenblatt, D.J. 1982 Journal of Clinical Pharmacology 22:309-315

Barbituric acid, 5-sec-butyl-5-ethyl-, sodium salt (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-(1-methylpropyl)-, monosodium salt (9 CI)
143-81-7
C10-H16-N2-O3.Na
MW 235.27

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8301 Blood, plasma		GC	1	100-110 ug/ml	Not applicable	Maximum levels after two seperate drug overdoses. 10 and 30 hr comas. Doses not reported 44 yr old addict, Edinburgh, Scotland SCOTLAND; AGE; LIVER DISEASE; BLOOD PLASMA; DRUG ABUSE; DRUG INTERACTION; DRUGS; ALCOHOLIC BEVERAGES; METABOLISM	Forrest, J.A.H. Roscoe, P. Prescott, L.F. Stevenson, I.H. 1976 British Medical Journal 4(5943):499-502

Benzamide, N-(p-(2-(dimethylamino)ethoxy)benzyl)-3,4,5-trimethoxy- (8 CI)
Benzamide, N-((4-(2-dimethylamino)ethoxy)phenyl)meth- 3,4,5-trimethoxy- (9 CI)
138-56-7
C21-H28-N2-O5
MW 388.51

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8302 Blood, serum	Rectal	HPLC UV	6	3.2-0.8 ug/ml	Not applicable	0.5 and 4 hr after 600 mg as HCl salt. 2.4 u/ml at 15 min. Range of means, estimated from graph. Significant correlation with saliva levels Healthy volunteers BLOOD SERUM; SALIVA; DRUGS; COMPARATIVE EVALUATIONS	Robert, T.A. Daigneault, E.A. Hinton, P. Hagerdorn, A.M. 1982 Journal of Clinical Pharmacology 22:53-58
8303 Saliva	Rectal	GC/MS	6	1.3-0.3 ug/ml	Not applicable	0.5 and 4 hr after 600 mg as HCl salt. 0.7 u/ml at 15 min. Range of means, estimated from graph. Significant correlation with serum levels Healthy volunteers BLOOD SERUM; SALIVA; DRUGS; COMPARATIVE EVALUATIONS	Robert, T.A. Daigneault, E.A. Hinton, P. Hagerdorn, A.M. 1982 Journal of Clinical Pharmacology 22:53-58

Benzamide, N-(1-(2-(1H-indol-3-yl)ethyl)-4-piperidinyl)-
26844-12-2
C22-H25-N3-O
MW 347.46

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8384 Blood, plasma	Ingestion		1	Not applicable	6.44 mg/l	Overdose, 2500 mg, sampled prior to death. 43 yr old patient Unconsciousness, areflexia, respiratory depression, metabolic acidosis, hypotension, tachycardia, coma, convulsions, bradyarrhythmia, cardiac arrest, death SCOTLAND; ADULTS; SUICIDE; HYPERTENSION; BLOOD; ANTIHYPERTENSIVE AGENTS; DRUG ABUSE; DRUGS; LAVAGE; ALCOHOLS; DIAZEPAM	Hunter, R. 1982 British Medical Journal 285:1011

Benzamide, p-amino-N-(2-(diethylamino)ethyl)- (8 CI)
Benzamide, 4-amino-N-(2-(diethylamino)ethyl)- (9 CI)
51-06-9
C13-H21-N3-O
MW 235.37

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8385 Blood, serum	Injection		4	a) 6-0.08 ug/ml b) 0.42-0.2 ug/ml	a) Not given b) Not given	a) 0 and hr b) N-acetylprocainamide, metabolite 1 and 8 hr. Initially 0.2 ug/ml Dose 5.8-6 mg/kg. Estimated from graph 7-12 yr olds with atrial or ventricular arrhythmias Short elimination half-life and rapid plasma clearance indicate possible need for continuous IV to maintain effective plasma levels in children. FLORIDA; CHILDREN; CARDIOVASCULAR DISEASES; HEART DISEASES; BLOOD SERUM; ANTIARRHYTHMIC AGENTS; DRUG THERAPY	Singh, S. Gelband, H. Mehta, A.V. Kessler, K. Casta, A. Pickoff, A.S. 1982 Clinical Pharmacology and Therapeutics 32(5):607-611

Benzamide, 4-(acetylamino)-N-(2-(diethylamino)ethyl)-
32795-44-1
C15-H23-N3-O2
MW 277.41

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8306 Blood, serum	Ingestion	HPLC GC-EC	11	a) <0.1-0.464 ug/ml b) 0.173-0.531 ug/ml c) 0.339-0.793 ug/ml d) 0.255-0.723 ug/ml	a) 0.269 +or- 0.193 ug/ml b) 0.281 +or- 0.193 ug/ml c) 0.521 +or- 0.168 ug/ml d) 0.482 +or- 0.284 ug/ml	a) 1 hr after last dose, 6 controls b) 3 hr after last dose, 6 controls c) 1 hr after last dose, 5 patients d) 3 hr after last dose, 5 patients Repeated dose regimen of 1, 1.5 and 2 g/8 hr ac. 3 days each on 1 and 1.5 g, 4 days on 2 g. Normal subjects, 26.7 +or- 3.3 yr old, wt 70.3 +or- 14.3 kg. Patients with cardiomyopathy, 61.4 +or- 7.3 yr, wt 80.2 +or- 12.2 kg. ADULTS; HEART DISEASES; BLOOD SERUM; URINE; ANTIARRHYTHMIC AGENTS; DRUGS; METABOLITES	Ludden, T.H. Crawford, M.H. 1982 Clinical Pharmacology and Therapeutics 31(3):343-349
8307 Urine	Ingestion	HPLC GC-EC	11	a) 3.1-5.3% b) 1.7-4.5% c) 2.6-5.6% d) 1.2-3.1%	a) 4.2 +or- 0.9% b) 3.0 +or- 1.0% c) 4.3 +or- 1.2% d) 2.2 +or- 0.9% Mole % of recovered NAPA	a) After last 2 g dose, 6 controls b) After last 2 g dose, 5 patients c) After 1st 1 g dose, 6 controls d) After 1st 1 g dose, 5 patients Repeated dose regimen of 1, 1.5, and 2 g/8 hr. 3 days each on 1 and 1.5 g, 4 days on 2 g. Normal subjects, 26.7 +or- 3.3 yr old, wt 70.3 +or- 14.3 kg, and patients with cardiomyopathy, 61.4 +or- 7.3 yr, wt 80.2 +or- 12.2 kg. ADULTS; HEART DISEASES; BLOOD SERUM; URINE; ANTIARRHYTHMIC AGENTS; DRUGS; METABOLITES	Ludden, T.H. Crawford, M.H. 1982 Clinical Pharmacology and Therapeutics 31(3):343-349

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Benzamide, 4-(acetylamino)-N-(2-(diethylamino)ethyl)-
32795-44-1
C15-H23-N3-O2
MW 277.41

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8368 Urine	Ingestion	HPLC	3	a) 3178.9-185 ng b) 83-17.4 ng c) 2488.2-23.7 ng d) 64-9.5 ng e) 2144.7-98.7 ng f) 74.1-5.1 ng	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) N-acetylprocainamide (NAPA), after last 6 g dose b) Procainamide, after last 6 g dose of NAPA, same patient c) NAPA, after last 4.5 g dose d) Procainamide, after last 4.5 g dose of NAPA same patient 0-24 and 48-72 excretions. Dosage initiated at 3-4.5 g/day and increased until there was a reduced frequency of premature ventricular contractive, or until intolerable side effects developed. Patients with chronic ventricular arrhythmias, California Gastrointestinal, central nervous system, cardiovascular, musculoskeletal effects. URINE; ANTIARRHYTHMIC AGENTS; COMPARATIVE EVALUATIONS; CALIFORNIA; ADULTS; CARDIOVASCULAR DISEASES; DRUGS	Rodman, J.H. Hurst, A. Gaerdar, T. Cohen, J. Jolliffe, R.W. 1982 Clinical Pharmacology and Therapeutics 32(3):378-386

Benzene, 1,2-dimethoxy-4-methyl-5-(methylsulfinyl)-
38452-29-0
C10-H14-O3-S
MW 214.3

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0309 Blood, plasma	Ingestion	HPLC	6	a) 3.88-1.21 ug/ml b) 1.02-3.05 ug/ml c) 0.66-1.73 ug/ml d) 0.56-1.45 ug/ml	a) 2.97 +or- 0.95 ug/ml b) 2.14 +or- 0.76 ug/ml c) 1.14 +or- 0.41 ug/ml d) 1.06 +or- 1 ug/ml	a) Range of peaks at 0.25-1.0 hr after 100 mg, fasting b) Range of peaks at 1.0-2.0 hr after 100 mg with food c) RX71112 metabolite, range of peaks at 0.5-3.0 hr after 100 mg, fasting d) RX71112 metabolite, range of peaks at 1.5-4.0 hr after 100 mg, with food Hypertensives not controlled with beta-blocker and thiazide diuretics, Glasgow, Scotland Dose adjusted to achieve blood pressures of 160/95 mm hg BLOOD PLASMA; ANTIHYPERTENSIVE AGENTS; SCOTLAND; ADULTS; HYPERTENSION; BLOOD PRESSURE; METABOLITES	Elliot, H.L. Meredith, P.A. McLean, K. Hughes, M.A. Reid, J.L. 1982 European Journal of Clinical Pharmacology 21:287-291

Benzeneethanol, beta-(2-(dimethylamino)propyl)-alpha-ethyl-beta-phenyl-, acetate (ester), (S-(R*,R*))-
1477-40-3
C23-H31-N-O2
MW 353.49

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0310 Blood, plasma	Ingestion	GC	10	a) 130-45 ng/ml b) 45-10 ng/ml c) 20-25 ng/ml d) 190-45 ng/ml e) 215-65 ng/ml f) 275-175 ng/ml g) <50 ng/ml h) 11-5 ng/ml i) 12-8 ng/ml j) 190-50 ng/ml k) 330-95 ng/ml l) 325-170 ng/ml	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given	a) Levo-alpha-acetylmethadol (LAAM). 8 and 24 hr after 60 mg. 65 ng/ml at 2 hr and 50 ng/ml at 48 hr. 50 mg/day methadone given for 90 days previously. 5 subjects b) Noracetylmethadol (N-LAAM). 2 and 48 hr. Same study as a) c) Dinoracetylmethadol (DN-LAAM). 2 and 12 hr. 20 ng/ml at 48 hr. Same study as a) d) LAAM. 4 and 72 hr after 30th dose. Dose, 3x/week, increased from 60 to 85 mg. 3 of 5 subjects from a) not receiving methadone e) N-LAAM. 8 and 48 hr. 100 ng/ml at about 1 hr and 70 ng/ml at 70 hr. Same study as d) f) DN-LAAM. 8 and 72 hr. 185 ng/ml at 2 hr. Same study as d) g) LAAM. Below detection limit, after 25 mg. 5 opiate addicts, no known exposure to methadone h) N-LAAM. 4 and 36 hr. Same study as g) i) DN-LAAM. 4 and 36 hr. Same study as g) j) LAAM. 4 and 72 hr after 30th dose (85 mg 3x/wk), 3 of 5 subjects from g) k) N-LAAM. 4 and 72 hr. Same study as j). Increased to 140 ng/ml after 50 mg methadone at 72 hr l) DN-LAAM. 4 and 72 hr. Same study as j). Level increased to 220 ng/ml after 50 mg methadone at 72 hr Range of means, estimated from graph Opiate addicts, CA CALIFORNIA; ADULTS; BLOOD PLASMA; ANALGESICS; DRUG INTERACTION; DRUG THERAPY; DRUGS; NARCOTICS; URINE; METABOLITES	Henderson, G.L. Wilson, B.E. Lau, B.H.H. 1977 Clinical Pharmacology and Therapeutics 21(1):16-25

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Benzeneethanol, beta-(2-(dimethylamino)propyl)-alpha-ethyl-beta-phenyl-, acetate (ester), (S-(R*,R*))-
1477-40-3
C23-H31-N-O2
MW 353.49

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8311 Urine	Ingestion	GC	10	a) Not given b) Not given c) Not given d) Not given	a) 2% of dose b) 6% of dose c) 4% of dose d) 4% of dose	a) 72 hr excretion (including metabolites) after 60 mg. 5 subjects in methadone therapy (50 mg/day) for 90 days previously b) After 30th dose. (60 increased to 85 mg 3x/week). 3 of 5 subjects from a) c) 36 hr excretion (including metabolites) after 20 mg. 5 opiate addicts not on methadone d) 36 hr excretion after 30th dose (20 increased to 85 mg 3x/week). 3 of 5 subjects from c) Opiate addicts, CA CALIFORNIA; ADULTS; BLOOD PLASMA; ANALGESICS; DRUG INTERACTION; DRUG THERAPY; DRUGS; NARCOTICS; URINE; METABOLITES	Henderson, G.L. Wilson, B.K. Lee, D.H.K. 1977 Clinical Pharmacology and Therapeutics 21(1):16-25

Benzoic acid, p-(dipropylsulfamoyl)- (8 CI)
Benzoic acid, 4-((dipropylamino)sulfonyl)- (9 CI)
57-66-9
C13-H19-N-O4-S
MW 285.36, MP 194-196 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8312 Blood, plasma	Ingestion	HPLC	5	a) 32.9-1.7 ug/ml b) 1.8-65.7 ug/ml c) 126.2-1.1 ug/ml	a) Not given b) Not given c) Not given	a) 3 and 24 hr after 0.5 g. Initially 3.4 ug/ml at 0.5 hr b) 0.5 and 4 hr after 1.0 g c) 2.5 and 48 hr after 2.0 g. Initially 11.3 ug/ml at 0.5 hr Range of means Healthy 20-39 yr olds, wt 53-86 kg ADULTS; BLOOD PLASMA; COMPARATIVE EVALUATIONS; DRUGS	Solen, A. Amidon, G.L. Welling, P.G. 1982 Journal of Pharmaceutical Sciences 71(11):1238-1242

Benzoic acid, 2-hydroxy-, monosodium salt
54-21-7
C7-H6-O3.Na
MW 160.11

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0313 Blood, plasma	Ingestion	Fluorometry	12	a) 52.3-65.0 ug/ml b) 58.2-76.6 ug/ml c) 43.0-67.1 ug/ml d) 60.8-77.1 ug/ml e) 51.1-59.1 ug/ml f) 58.8-82.7 ug/ml g) 60.3-67.5 ug/ml h) 54.4-60.6 ug/ml i) 59.9-72.7 ug/ml j) 53.6-83.8 ug/ml	a) 55.4 +or- 2.6 ug/ml b) 67.4 +or- 3.1 ug/ml c) 56.1 +or- 3.8 ug/ml d) 71.8 +or- 2.5 ug/ml e) 55.2 +or- 1.3 ug/ml f) 71.0 +or- 3.8 ug/ml g) 63.7 +or- 1.1 ug/ml h) 58.0 +or- 3.8 ug/ml i) 61.8 +or- 4.0 ug/ml j) 65.8 +or- 8.6 ug/ml	a) 5-600 min after 9 mg/kg, day 2 of menstrual cycle b) 5-600 min after 9 mg/kg, day 2, males c) 5-600 min after 9 mg/kg, day 7 of menstrual cycle d) 5-600 min after 9 mg/kg, day 7, males e) 5-600 min after 9 mg/kg, day 14 of menstrual cycle f) 5-600 min after 9 mg/kg, day 14, males g) 5-600 min after 9 mg/kg, day 28 of menstrual cycle h) 5-600 min after 9 mg/kg, day 28, males i) 5-600 min after 9 mg/kg, day 25 of menstrual cycle j) 5-600 min after 9 mg/kg, day 25, males Healthy, nonsmoking 23-34 yr olds. No drugs or alcohol, no food or drink containing methylxanthines before or during the study. ANALGESICS; COMPARATIVE EVALUATIONS; ADULTS; SEX; BLOOD PLASMA; MENSTRUATION	Hinkiewicz, R.L. Shively, C.A. Vessell, E.S. 1982 Journal of Clinical Pharmacology and Therapeutics 31(1):30-37

Benzoic acid, 2-hydroxy-, 2-carboxyphenyl ester
552-94-3
C14-H10-O5
MW 258.23, MP 230 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8314 Blood, plasma	Ingestion	HPLC	12	a) Not given b) 38.0-77.4 ug/ml c) Not given d) Not given	a) 21.1 +or- 2.0 ug/ml b) 54.4 +or- 3.9 ug/ml c) 15 ug/ml d) 130 ug/ml S.E.	a) Peak unchanged drug, 1.5 hr after 1000 mg, 12 subjects fasted overnight. Not detectable at 6 hr in 10 subjects b) Peak salicylic acid (metabolite), 2-4 hr after dose a), 10 of 12 subjects c) Peak, unchanged drug, after 1000 mg 3X/day for 5 days, 4 subjects d) Peak, salicylic acid, after dose c), 4 subjects c) & d) estimated from graph Healthy, 21-45 yr olds METABOLISM; METABOLITES; DRUGS; BLOOD PLASMA; URINE; ADULTS; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTIPYRETICS	Harrison, L.I. Funk, H.L. Osvaldo, N.R. Ober, R.E. 1981 Journal of Clinical Pharmacology 21:481-484
8315 Urine	Ingestion	HPLC	12	1.2-7.4 mg	Not given	Unchanged drug, 0-24 hr after 1000 mg following overnight fast. None detected after 24 hr. Healthy, 21-45 yr olds METABOLISM; METABOLITES; DRUGS; BLOOD PLASMA; URINE; ADULTS; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTIPYRETICS	Harrison, L.I. Funk, H.L. Osvaldo, N.R. Ober, R.E. 1981 Journal of Clinical Pharmacology 21:481-484

Benzoic acid, 3-(aminosulfonyl)-4-phenoxy-5-(1-pyrrolidinyl)-
55837-27-9
C17-H18-N2-O5-S
MW 362.48

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8316 Blood, plasma	Ingestion	Spectrofluorometry	8	2.59-8.29 ug/ml	4.14 +or- 1.97 ug/ml	Peak, 60-180 min after 56 mg dose Uremic patients, mean age 47.5 yr, mean wt 56.3 kg FRANCE; ADULTS; KIDNEY DISEASES; BLOOD PLASMA; DIURETICS; DRUGS; HEMODIALYSIS	Brazier, J.L. Poset, M. Faucon, G. Traeger, J. Hadj-Haissa, A. 1982 European Journal of Clinical Pharmacology 21:307-310

Benzyl alcohol, alpha-((tert-butylamino)methyl-3,5-dihydroxy- (8 CI)
1,3-Benzenediol, 5-(2-((1,1-dimethylethyl)amino)-1-hydroxyethyl)- (9 CI)
23031-25-6
C12-H19-N-03
MW 225.32

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8317 Blood, plasma	Injection Ingestion		11	a) 10-0 ug/l b) 5.5-2.5 ug/l c) 5.5-3.0 ug/l d) 2.2-1.5 ug/l	a) Not given b) Not given c) Not given d) Not given	a) 0 and 8 hr after 250 ug/5 min, IV b) Day 1 of 13 day study, 5 mg, 3X/d, oral c) Day 13 5 mg, 3X/d, oral d) Day 14 after dose on day 13 5 mg, 3X/d final Range of means, estimated from graph Healthy 27-38 yr olds, wt 68-94 kg DRUGS; COMPARATIVE EVALUATIONS; ADULTS; BLOOD PLASMA	Boagtzoon, B. Fagerstrom, P.-O. 1982 Clinical Pharmacology and Therapeutics 31(6):726-732

Butanedioic acid, mono((4-butyl-3,5-dioxo-1,2-diphenyl-4-pyrazolidinyl)methyl) ester
27470-51-5
C20-H26-N2-06
MW 438.48, MP 126-127 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8318 Blood, plasma	Ingestion	HPLC GC/MS	6	a) Not given b) Not given c) Not given d) Not given	a) 35.96 ug/ml b) 1 ug/ml c) 6.9 ug/ml d) 2.6 ug/ml	a) Phenylbutazone, metabolite, 4 hr after 426 mg suxibuzone b) Gamma-hydroxyphenylbutazone, metabolite, 4 hr after 426 mg suxibuzone c) Oxyphenbutazone, metabolite, peak, 48 hr after 426 mg suxibuzone d) Oxyphenbutazone, 168 hr after 426 mg suxibuzone Values in c), d) estimated from graph 27-35 yr old volunteers, wt 54-68 kg BLOOD PLASMA; URINE; ANTI-INFLAMMATORY AGENTS; DRUGS; ADULTS; METABOLISM; METABOLITES	Yasuda, Y. Shindo, T. Hitomi, H. Ishida, M. Ozono, F. Kageyama, T. 1982 Journal of Pharmaceutical Sciences 71(5):565-572

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Butanedioic acid, mono((4-butyl-3,5-dioxo-1,2-diphenyl-4-pyrazolidinyl)methyl) ester
27470-51-5
C24-H26-N2-O6
MW 438.48, MP 126-127 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0319 Urine	Ingestion	HPLC GC/MS	6	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 0.12% of dose b) 0.45% of dose c) 0.44% of dose d) 0.93% of dose e) 0.79% of dose f) 0.49% of dose g) 2.44% of dose	a) Suxibuzone glucuronide, 0-6 hr b) 4-hydroxymethylphenylbutazone glucuronide, 0-6 hr c) 4-hydroxymethyloxyphenbutazone glucuronide, 0-6 hr d) Phenylbutazone, 0-168 hr e) O-phenylbutazone glucuronide, 0-168 hr f) Oxyphenbutazone, 0-168 hr g) Gamma-hydroxyphenylbutazone, 0-24 hr Times after 426 mg suxibuzone. 27-35 yr old volunteers, wt 54-68 kg BLOOD PLASMA; URINE; ANTI-INFLAMMATORY AGENTS; DRUGS; ADULTS; METABOLISM; METABOLITES	Yasuda, T. Shindo, T. Mitani, M. Ishida, M. Ono, F. Kageyama, T. 1982 Journal of Pharmaceutical Sciences 71(5):565-572

Caffeine (8 CI)
1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl- (9 CI)
58-08-2
C8-H10-N4-O2
MW 194.19, MP 238 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0320 Blood, plasma		RIA	600	0.2-13.1 mg/l	3.12 mg/l	300 men, 300 women. No significant differences. Levels <5.6 ug/ml in 95% of cases. Adults, United Kingdom UNITED KINGDOM; ADULTS; SEX; BLOOD PLASMA; DIURETICS; DRUGS; STIMULANTS; CAFFEINE; POPULATION EXPOSURE	Smith, J.M. Pearson, S. Marks, V. 1982 Lancet 2(8305):985-986

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Caffeine (8 CI)
1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl- (9 CI)
58-08-2
C8-H10-N4-O2
MW 194.19, MP 238 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8321 Blood, plasma	Injection Ingestion	HPLC	9	a) Not given b) Not given	a) 49.4 +or- 5.2 umol/l b) 50.8 +or- 1.2 umol/l	a) Steady state 24 hr after loading dose of 20 mg/kg as sodium citrate, IM b) With subsequent maintenance dose, 5 mg/kg/day, oral for mean of 14 days Premature infants, gestational age 30.1 +or- 0.6 wk, birth wt 1,247 +or- 161 g, age at test 13.2 +or- 2.3 days Significant decrease of mild and severe apnea. No adverse effects FRANCE; INFANTS; BLOOD PLASMA; STIMULANTS; DRUG THERAPY; DRUGS; CAFFEINE	Murat, I. Moriette, G. Blin, M.C. Couchard, M. Flouvet, B. De Gammarra, E. Bellier, J.P. Dreyfus-Brisac, C. 1981 Journal of Pediatrics 99(5):984-989
8322 Blood, plasma	Ingestion	TLC	1	2000-700 ng/ml	Not given	0.5 and 12 hr after 65 mg. Estimated from graph 32 yr old mother, week 7 of lactation MILK; COMPARATIVE EVALUATIONS; CAFFEINE; ADULTS; BLOOD PLASMA; LACTATION; ANTIPYRETICS; ANALGESICS; SEDATIVES; DRUGS	Welch, R.M. Findlay, J.W.A. 1981 Drug Metabolism Reviews 12(2):261-277
8323 Blood, plasma	Ingestion	HPLC	4	a) Not given b) Not given c) Not given	a) 8.3 +or- 0.1 ug/ml b) 2.0 +or- 0.2 ug/ml c) 0.4 +or- 0.04 ug/ml S.E.	a) 47 +or- 5 min after 5 mg/kg as aqueous solution (70 ml) b) 52 +or- 22 min after 1.54 mg/kg as mocha coffee (50 ml) c) 38 +or- 8 min after 0.22 mg/kg as soft drink (190 ml) Peaks Healthy 26-36 yr olds, mean wt 70 kg BLOOD PLASMA; URINE; DIURETICS; DRUGS; STIMULANTS; CAFFEINE; FOOD ADDITIVES; FOODS	Bonati, M. Latini, R. Galletti, F. Young, J.F. Tognoni, G. Garattini, S. 1982 Clinical Pharmacology and Therapeutics 32(1):98-106

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Caffeine (8 CI)
1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl- (9 CI)
58-08-2
C8-H10-N4-O2
MW 194.19, MP 238 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8324 Blood, serum	Ingestion	GC	20	a) 0.00-0.3 ug/ml b) 0.00-0.9 ug/ml c) Not given d) Not given e) Not given f) Not given	a) Not given b) Not given c) 0.8 +or- 1.5 ug/ml d) 12.6 +or- 2.6 ug/ml e) 5.0 +or- 1.2 ug/ml f) 12.5 +or- 1.7 ug/ml	a) 1 hr after 250 ml decaffeinated coffee b) 1 hr after 750 ml decaffeinated coffee c) 1 hr after 250 ml decaffeinated coffee plus 200 mg caffeine d) 1 hr after 250 ml decaffeinated coffee plus 500 mg caffeine e) 2 hr after 250 ml decaffeinated coffee plus 200 mg caffeine f) 2 hr after 250 ml decaffeinated coffee plus 500 mg caffeine. Healthy students, ages 20-23 yr BEHAVIOR DISORDERS; ADULTS; ALCOHOLIC BEVERAGES; CAFFEINE; BLOOD; COMPARATIVE EVALUATIONS; ALCOHOLS; DRUGS	Huotto, H. Mattila, M.J. Seppala, T. Konno, K. 1982 Clinical Pharmacology and Therapeutics 31(1):68-76
8325 Blood, serum	Ingestion		6	a) Not given b) Not given c) Not given d) Not given	a) 6.4 +or- 0.8 ug/ml b) 2.6 +or- 0.6 ug/ml c) 2.4 +or- 0.2 ug/ml d) 0.4 +or- 0.02 ug/ml	a) Total C-14 equivalents b) 1,3,7-trimethylxanthine c) 1,7-dimethylxanthine/1,3-dimethylxanthine d) 3,7-dimethylxanthine, 2 subjects 41% of total equivalents accounted for by caffeine, 84% by caffeine + dimethylxanthines, 8 hr after 5 mg/kg. Other data presented for 0.5-4 hr after dosing. Maximum concentration of about 9 ug/ml of 30 min. Healthy adult smokers, wts 60.0-79.0 kg ADULTS; SALIVA; URINE; CAFFEINE; METABOLISM; METABOLITES; RADIOISOTOPES	Callahan, H.M. Robertson, R.S. Arnaud, M.J. Bronfman, A.R. McCunish, M.P. Tuscir, D.W. 1982 Drug Metabolism and Disposition 10(6):617-623
8326 Blood, serum	Ingestion	GC	a) 1 b) 1	a) 5.8-2.3 ug/ml b) 4-0.8 ug/ml	a) Not applicable b) Not applicable	a) Nonsmokers, 15 min and 8 hr after 3 mg/kg b) Smoker, 1 and 8 hr after 3 mg/kg. 1.7 ug/ml at 15 min Estimated from graph Healthy subjects between 22 and 38 yr old. METABOLISM; ADULTS; BLOOD SERUM; SMOKE; STIMULANTS; COMPARAIVE EVALUATIONS; CAFFEINE	Rotahe, A.M. Schneller, B.A. Lambert, G.H. Baker, A.L. Schaffer, D.G. Josephs, H. 1982 Clinical Pharmacology and Therapeutics 32(2):261-269

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Caffeine (8 CI)
1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl- (9 CI)
58-08-2
C8-H10-N4-O2
NSC 194.19, NSC 238 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0327 Breath	Ingestion	Radiometry	8	0.8-1.7% of dose	1.3 +or- 0.3% of dose	0-48 hr output of CO2 after dose of 5 mg/kg of (1-methyl-C-14)caffeine Healthy 21-39 yr olds, wt 60.8-79.0 kg ADULTS; SALIVA; URINE; CAFFEINE; METABOLISM; METABOLITES; RADIOISOTOPES	Callahan, M.M. Robertson, R.S. Arnaud, M.J. Bronfman, A.R. McComish, M.F. Yeomir, D.W. 1983 Drug Metabolism and Disposition 10(4):417-422
0328 Breath	Ingestion	CO2 breath test Radiometry Spectrophotometry	9	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 4.5 +or- 0.6% b) 2.4 +or- 0.3% c) 3.6 +or- 0.8% d) 1.8 +or- 0.2% e) 2.2 +or- 0.3% f) 1.2 +or- 0.2% % of dose S.E.	a) 5 smokers, after 1 mg/kg b) 4 nonsmokers, after 1 mg/kg c) Smokers, after 3 mg/kg d) Nonsmokers, after 3 mg/kg e) Smokers, after 5 mg/kg f) Nonsmokers, after 5 mg/kg 2 hr cumulative excretion of CO2 after caffeine labelled in all 3 methyl positions. Correlation with caffeine metabolic clearance rate. Other data show N-demethylation occurs primarily in the 3 and 7 positions. Healthy 22-30 yr olds ADULTS; BREATH; STIMULANTS; COMPARATIVE EVALUATIONS; CAFFEINE; METABOLISM; BLOOD SERUM; DRUGS	Kotake, A.N. Schoeller, D.A. Lambert, G.H. Baker, A.L. Schaffer, D.C. Josephs, H. 1982 Clinical Pharmacology and Therapeutics 32(2):261-269
0329 Milk						Review. General pharmacological principles associated with excretion of drugs and chemicals in human milk. PENNSYLVANIA; UNITED STATES; ADULTS; INFANTS; MILK; SALIVA; URINE; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTICOAGULANTS; ANTIPYRETICS; DIURETICS; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; CAFFEINE; NICOTINE; PESTICIDES; SODIUM; THEOPHYLLINES; ALCOHOLIC BEVERAGES; LACTATION; METABOLISM; METABOLITES; TOBACCOS	Berlin, C.M., Jr. 1981 Obstetrics and Gynecology 58(5)(Supplement):17S-23S

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Caffeine (8 CI)
1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl- (9 CI)
58-08-2
C8-H10-N4-O2
MW 194.19, MP 238 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8330 Milk	Ingestion	TLC	1	1500-600 ng/ml	Not given	1.5 and 12 hr after 65 mg. Estimated from graph 32 yr old mother, week 7 of lactation MILK; COMPARATIVE EVALUATIONS; CAFFEINE; ADULTS; BLOOD PLASMA; LACTATION; ANALGESICS; ANTIPYRETICS; SEDATIVES; DRUGS	Welch, R.M. Findlay, J.W.A. 1981 Drug Metabolism Reviews 12(2):261-277
8331 Saliva	Ingestion	RIA	4	a) 0.55-1.20 ug/ml b) 0.02-0.10 ug/ml	a) 0.84 +or- 0.13 ug/ml b) 0.07 +or- 0.017 ug/ml SE	a) 38-40 wk gestation b) 2-12 wk postpartum No caffeine for 24 hr Hourly caffeine clearance 44 ml/kg and 166 ml/kg, respectively, are significantly different (P<0.05) 26-36 yr olds, Canada CANADA; ADULTS; SALIVA; DIURETICS; DRUGS; STIMULANTS; CAFFEINE; FREQUENCY; SMOKING	Parsons, W.D. Pelletier, J.G. 1982 Journal of the Canadian Medical Association 127:377-388
8332 Saliva	Ingestion			a) Not given b) Not given c) Not given d) Not given	a) 4.6 +or- 0.7 ug/ml b) 2.0 +or- 0.4 ug/ml c) 1.7 +or- 0.2 ug/ml d) 0.5 +or- 0.02 ug/ml	a) Total C-14 equivalents b) 1,3,7-trimethylxanthine c) 1,7-dimethylxanthine/1,3-dimethylxanthine d) 3,7-dimethylxanthine, subjects 43% of total equivalents accounted for by caffeine and 91% by caffeine + dimethylxanthines, 8 hr after 5 mg/kg. Other data presented for 0.5-4 hr. Healthy adult smokers, wts 60.0-79.0 kg ADULTS; SALIVA; URINE; CAFFEINE; METABOLISM; METABOLITES; RADIOISOTOPES	Callahan, M.M. Robertson, R.S. Arnaud, M.J. Branfman, A.R. McConish, H.F. Yesair, D.W. 1982 Drug Metabolism and Disposition 10(4):417-423

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Caffeine (8 CI)
1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl- (9 CI)
58-08-2
CE-H10-H4-02
MW 194.19, MP 238 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0333 Urine						Review. General pharmacological principles associated with excretion of drugs and chemicals in human milk. PENNSYLVANIA; UNITED STATES; ADULTS; INFANTS; BILE; SALIVA; URINE; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTICOAGULANTS; ANTIPYRETICS; DIURETICS; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; CAFFEINE; NICOTINE; PESTICIDES; SODIUM; THEOPHYLLINES; ALCOHOLIC BEVERAGES; LACTATION; METABOLISM; METABOLITES; TOBACCOS	Berlin, C.M., Jr. 1981 Obstetrics and Gynecology 58(5)(supplement):17S-23S
0334 Urine	Ingestion	Radiometry	12	a) 65-77% b) 76-91% c) Not given c') Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given m) Not given n) Not given o) Not given % of dose	a) 72.5 +or- 4.6% b) 85.8 +or- 4.9% c) 14.70 +or- 6.4% d) 3.17 +or- 1.3% e) 10.14 +or- 2.9% f) 4.11 +or- 0.9% g) 7.72 +or- 1.6% h) 0.89 +or- 0.3% i) 5.86 +or- 2.5% j) 1.38 +or- 0.5% k) 1.24 +or- 0.7% l) 14.81 +or- 2.9% m) 1.80 +or- 0.4% n) 5.36 +or- 2.7% o) 1.30 +or- 0.4% % of dose	a) Total C-14-caffeine equivalents after 5 mg/kg of (1-methyl-C-14)caffeine (0-48 hr). Feces 0.7-3.5%. 8 subjects b) Total C-14-caffeine equivalents after 5 mg/kg of (2-C-14)caffeine (0-48 hr). Feces 0.4-4.7%. 8 subjects c) Unknown metabolite d) Unknown metabolite e) 1-methylxanthine f) 3-methylxanthine g) 7-methylxanthine h) 1,3-dimethylxanthine i) 1,7-dimethylxanthine j) 3,7-dimethylxanthine k) 1,3,7-trimethylxanthine l) 1-methyluric acid m) 1,3-dimethyluric acid n) 1,7-dimethyluric acid o) 1,3,7-trimethyluric acid In c)-o), metabolites after 5 mg/kg (0-48 hr), 4 subjects Healthy 21-39 yr olds, wt 60.8-79.0 kg ADULTS; SALIVA; URINE; CAFFEINE; METABOLISM; METABOLITES; RADIOISOTOPES	Callahan, M.M. Robertson, R.E. Arnaud, M.J. Branfman, A.R. McComish, M.F. Yasair, D.W. 1982 Drug Metabolism and Disposition 10(4):417-423

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Caffeine (8 CI)
1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl- (9 CI)
58-08-2
C8-H10-N4-O2
MW 194.19, MP 238 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0335 Urine	Ingestion	HPLC	4	69.7-107.8% of dose	85.5 +or- 9.0% of dose S.E.	Excreted within 48 hr after 5 mg/kg as aqueous solution (70 ml) Healthy 26-36 yr olds, mean wt 70 kg BLOOD PLASMA; URINE; DIURETICS; DRUGS; STIMULANTS; CAFFEINE; FOOD ADDITIVES; FOODS	Bonati, M. Latini, R. Galletti, F. Young, J.F. Tognoni, G. Garattini, S. 1982 Clinical Pharmacology and Therapeutics 32(1):98-106

Card-20(22)-enolide, 3-((O-2,6-dideoxy-4-O-methyl-beta-D-ribo-hexopyranosyl-(1-4)-O-2,-6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-2,6-dideoxy-beta-D-ribo-hexopyranosyl)oxy)-12,14-dih ydroxy-, (3beta,5beta,12beta)-
20685-41-9
C42-H66-O14
MW 826.12, MP 227-231 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0336 Blood, plasma	Ingestion	RIA Uptake inhibition	56	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 1.19 +or- 0.38 ng/ml b) 1.26 +or- 0.43 ng/ml c) 1.15 +or- 0.50 ng/ml d) 1.22 +or- 0.59 ng/ml e) 0.96 +or- 0.29 ng/ml f) 0.96 +or- 0.33 ng/ml	a) Controls, RIA b) Controls, Rb-86 uptake inhibition assay c) Chronic hepatitis patients, RIA d) Chronic hepatitis patients, Rb-86 uptake inhibition assay e) Liver cirrhosis, RIA f) Liver cirrhosis patients, Rb-86 uptake inhibition assay Dose: 20 mg/d 9 days 25-72 yr old hepatitis and cirrhosis patients. Controls, patients with normal liver and kidney function. BLOOD PLASMA; URINE; COMPARATIVE EVALUATIONS; ADULTS; CIRRHOSIS; HEART DISEASE; DRUGS; LIVER DISEASES	Malini, P.L. Carti, P. Dal Monte, P.R. Crepioni, A. Bocchi, G. Ambrosioni, E. 1982 International Journal of Clinical Pharmacological Research 11(1):21-27

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Card-20(22)-enolide, 3-((O-2,6-dideoxy-4-O-methyl-beta-D-ribo-hexopyranosyl-(1-4)-O-2,-6-dideoxy-beta
-D-ribo-hexopyranosyl-(1-4)-2,6-dideoxy-beta-D-ribo-hexopyranosyl)oxy)-12,14-dih ydroxy-, (3beta,5beta,12beta)-
30685-43-9
C42-H66-O14
MW 824.12, MP 227-231 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8337 Urine	Ingestion	HPLC RIA	56	a) 32.6-53.1% b) 39.3-61.1% c) 41.1-61.5% d) 43.3-63.1% e) 36.3-56.3% f) 34.3-53.3%	a) 45.05% b) 48.10% c) 52.40% d) 50.14% e) 47.84% 42.33%	a) Controls b) Chronic hepatitis patients c) Liver cirrhosis patients d) Digoxin, controls e) Digoxin, chronic hepatitis patients f) Digoxin, liver cirrhosis patients % of total quantity extracted. Dose: Methyldigoxin, 0.20 mg/d for 9 days. 25-72 yr old hepatitis and cirrhosis patients. Controls, patients with normal liver and kidney function. BLOOD PLASMA; URINE; COMPARATIVE EVALUATIONS; ADULTS; CIRRHOSIS; HEART DISEASES; LIVER DISEASES; DRUGS	Malini, P.L. Sarti, F. Del Monte, P.R. Crepioni, A. Bocchi, E. Ambrosioni, E. 1982 International Journal of Clinical Pharmacological Research 11(1):21-27

Copper
7440-50-8
Cu
AEW 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8330 Blood, serum						Review. Assessment of clinical use of laboratory determinations for metals, anticonvulsive agents, and cardiovascular drugs. ADULTS; AGE; CHILDREN; ANEMIA; BONE DISEASES; DISEASES; MENTAL RETARDATION; METAL POISONING; NUTRITIONAL DEFICIENCIES; SKIN DISEASES; BLOOD; BLOOD PLASMA; BLOOD SERUM; LIVER; URINE; ANTIARRHYTHMIC AGENTS; ANTICONVULSANTS; DIURETICS; DRUG THERAPY; DRUGS; HYPNOTICS; MUSCLE RELAXANTS; SEDATIVES; TRANQUILIZERS; REVIEW; COPPER; DIAZEPAM; IRON; LEAD; LITHIUM; THEOPHYLLINES; ZINC; PAINTS	Weiss, H.B. Rosenthal, I.M. 1978 Journal of Analytical Toxicology 2:166-171

Cortisol (8 CI)
Pregn-4-ene-3,20-dione, 11,17,21-trihydroxy-, (11beta)- (9 CI)
8056-08-4
C21-H30-O5
MW 362.47, MP 217-220 C, commercial samples 212-213 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8339 Blood, plasma	Ingestion	HPLC UV	3	a) Not given b) Not given c) Not given	a) 199 ng/ml b) 393 ng/ml c) 619 ng/ml	a) 1 hr after 10 mg b) 1 hr after 30 mg c) 1.7 hr after 50 mg Peaks. 22-45 yr olds wt 64-75 kg. BLOOD PLASMA; DRUGS; COMPARATIVE EVALUATIONS; MEASUREMENT METHODS; ADULTS; STEROIDS	Toothaker, R.D. Sundaresan, G.N. Hunt, J.P. Gochl, T.J. Rotenberg, K.S. Prasad, V.K. Craig, W.A. Welling, P.G. 1982 Journal of Pharmaceutical Sciences 71(5):573-576

Cotinine (8 CI)
2-Pyrrolidinone, 1-methyl-5-(3-pyridinyl-,(S)- (9 CI)
486-56-6
C10-H12-N2-O
MW 176.21, 210-211 C at 6 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8340 Blood, plasma	Inhalation	GC	14	0-236 ng/ml	111.8 +or- 63.0 ng/ml	After not smoking overnight Healthy 21-34 yr old smokers (mean 18.6 cigarettes/day), mean nicotine consumption 23.2 mg/day ADULTS; BLOOD PLASMA; DRUGS; NICOTINE; INHALATION; SMOKING	Benowitz, N.L. Jacob, P., III Jones, R.T. Rosenberg, J. 1982 Journal of Pharmacology and Experimental Therapeutics 221(2):368-372

Coumarin, 3-(alpha-acetonylbenzyl)-4-hydroxy-, sodium salt (8 CI)
2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, sodium salt (9 CI)
129-06-6
C19-H16-O4.Na
MW 331.34

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8301 Blood, plasma	Ingestion	HPLC	1	a) 15.0-1.0 ug/ml b) 10.0-0.04 ug/ml c) 4.5-0.04 ug/ml d) 4.0-0.04 ug/ml e) 14.0-1.5 ug/ml f) 9.0-1.0 ug/ml	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 24 and 240 hr after 1.5 mg/kg b) 24 and 240 hr after 1.5 mg/kg plus 250 mg ticrynafen daily for 4 days c) S-warfarin 24 and 336 hr after 0.75 mg/kg coumarin d) S-warfarin 12 and 120 hr after daily 0.75 mg/kg coumarin plus 250 mg ticrynafen daily for 4 days e) R-warfarin 24 and 192 hr after 1.5 mg/kg coumarin f) R-warfarin 24 and 192 hr after 1.5 mg/kg coumarin plus 250 mg ticrynafen daily for 4 days Healthy volunteers Ticrynafen augmentated prothrombin time, warfarin and S-warfarin concentrations. Little effect on R-warfarin. ANTICOAGULANTS; COMPARATIVE EVALUATIONS; ADULTS; BLOOD PLASMA; DRUGS	O'Reilly, R.A. 1982 Clinical Pharmacology and Toxicology 32(5):356-361

D-Streptamine, O-3-amino-3-deoxy-alpha-D-glucopyranosyl-(1-6)-O-(6-amino-6-deoxy-alpha-D-glucopyranosyl-(1-4))-N(1)-(4-amino-2-hydroxy-1-oxobutyl)-2-deoxy-, (S)-
37517-28-5
C22-H43-N5-O13
MW 585.62, MP 203-204 C (sesquihydrate)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8342 Blood, serum	Injection	Microbiological	a) 5 b) 5	a) Not given b) Not given	a) 12.6 + or - 3.3 ug/ml b) 19.5 + or - 3.8 ug/ml	a) Patients, at 30-60 min b) Controls, at 30-60 min Peaks Dose, 5.5 mg/kg Bedridden 75.6 yr olds, healthy 29 yr olds ADULTS; KIDNEY DISEASES; BLOOD SERUM; URINE; ANTIBIOTICS; COMPARATIVE EVALUATIONS	Yasuhara, M. Kobayashi, S. Sakamoto, K. Hamijo, K. 1982 Journal of Clinical Pharmacology 22:463-469

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D-Streptamine, O-3-amino-3-deoxy-alpha-D-glucopyranosyl-(1-6)-O-(6-amino-6-deoxy-alpha-D-glucopyranosyl-(1-4))-N(1)-(4-amino-2-hydroxy-1-oxobutyl)-2-deoxy-, (S)-
37517-28-5
C22-H43-N5-O13
MW 505.62, MP 203-204 C (sesquihydrate)

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0343 Urine	Injection	Microbiological	a) 5 b) 5	a) 10-44% of dose b) 35-69% of dose	a) Not given b) Not given	a) Patients, at 2 and 8 hr b) Controls, at 2 and 8 hr Dose, 5.5 mg/kg. Bedridden 75.6 yr olds, healthy 29 yr olds ADULTS; KIDNEY DISEASES; BLOOD SERUM; URINE; ANTIBIOTICS; COMPARATIVE EVALUATIONS	Yasuhara, H. Kobayashi, S. Sakamoto, K. Nomijo, K. 1982 Journal of Clinical Pharmacology 22:403-409

Dibenz(b,e)oxepin-delta(11(6H),gamma)-propylamine, N,N-dimethyl- (8 CI)
1-Propanamine, 3-dibenz(b,e)oxepin-11(6H)-ylidene-N,N-dimethyl- (9 CI)
1668-19-5
C19-H21-N-O
MW 279.37, BP 154-157 C at 0.03 mm Hg, 266-270 C at 0.3 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0344 Blood	Ingestion	UV GC	1	Not applicable	1.9 mg/100 ml	Fatal overdose 38 yr old Edema, atelectasis and localized areas of congestion SUICIDE; BLOOD; LIVER; URINE; ANTIDEPRESSIVE AGENTS; DRUG ABUSE; DRUGS	Norheim, G. 1973 Archiv fur Toxikologie 31:7-12
0345 Blood		GC	9	a) Not given b) Not given c) Not given d) Not given	a) 19 +or- 26 mg/l b) 1.6 +or- 1.8 mg/l c) 0.07 +or- 0.04 mg/l d) 0.08 +or- 0.07 mg/l	a) Fatal overdoses b) Fatal overdoses, nordoxepin, (metabolite) c) Deaths by other causes, therapeutic drug involvement d) Deaths by other causes, therapeutic drug involvement, nordoxepin Autopsies, MD MARYLAND; AUTOPSIES; BLOOD; ANTIDEPRESSIVE AGENTS; FORENSIC MEDICINE; DRUGS; DRUG ABUSE; HEART; LIVER; MUSCLES	Hobb, J.H., Jr. Caplan, Y.H. Crooks, C.R. Sunguer, W.J. 1982 Journal of Analytical Toxicology 6:208-216

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Dibenz(b,e)oxepin-delta(11(6H),gamma)-propylamine, N,N-dimethyl- (9 CI)
1-Propenamine, 3-dibenz(b,e)oxepin-11(6H)-ylidene-N,N-dimethyl- (9 CI)
1660-19-5
C19-H21-N-O
MW 279.37, BP 150-157 C at 0.03 mm Hg, 260-270 C at 0.2 mm Hg

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0346 Heart		GC	9	a) Not given b) Not given c) Not given d) Not given	a) 14 +or- 13 mg/kg b) 5.1 +or- 3.9 mg/kg c) 0.26 +or- 0.09 mg/kg d) 0.31 +or- 0.23 mg/kg	a) Fatal overdoses b) Fatal overdoses, nordoxepin, (metabolite) c) Deaths by other causes, therapeutic drug involvement d) Deaths by other causes, therapeutic drug involvement, nordoxepin Autopsies, MD MARYLAND; AUTOPSIES; BLOOD; ANTIDEPRESSIVE AGENTS; FORENSIC MEDICINE; DRUGS; DRUG ABUSE; HEART; LIVER; MUSCLES	Hubb, J.H., Jr. Caplan, Y.H. Crooks, C.H. Morgear, W.J. 1982 Journal of Analytical Toxicology 6:209-216
0347 Liver	Ingestion	UV GC	1	Not applicable	32 mg/100 g	Fatal overdose 35 yr old. Edema, atelectasis and localised areas of congestion SUICIDE; BLOOD; LIVER; URINE; ANTIDEPRESSIVE AGENTS; DRUG ABUSE; DRUGS	Norheim, G. 1973 Archiv fur Toxikologie 31:7-12
0346 Liver		GLC	9	a) Not given b) Not given c) Not given d) Not given	a) 42 +or- 44 mg/kg b) 12 +or- 14 mg/kg c) 2.8 +or- 1.2 mg/kg d) 1.3 +or- 0.86 mg/kg	a) Fatal overdoses b) Fatal overdoses, nordoxepin, (metabolite) c) Deaths by other causes, therapeutic drug involvement d) Deaths by other causes, therapeutic drug involvement, nordoxepin Autopsies, MD MARYLAND; AUTOPSIES; BLOOD; ANTIDEPRESSIVE AGENTS; FORENSIC MEDICINE; DRUGS; DRUG ABUSE; HEART; LIVER; MUSCLES	Hubb, J.H., Jr. Caplan, Y.H. Crooks, C.H. Morgear, W.J. 1982 Journal of Analytical Toxicology 6:209-216

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Dibenz(b,e)oxepin-delta(11(6H),gamma)-propylamine, N,N-dimethyl- (8 CI)
1-Propanamine, 3-dibenz(b,e)oxepin-11(6H)-ylidene-N,N-dimethyl- (9 CI)
1668-19-5
C19-H21-N-O
MW 279.37, BP 156-157 C at 0.03 mm Hg, 260-270 C at 0.2 mm Hg

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8348 Muscle		GC	9	a) Not given b) Not given c) Not given d) Not given	a) 4.0 +or- 3.7 mg/kg b) 1.5 +or- 1.8 mg/kg c) 0.03 +or- 0.03 mg/kg d) 0.04 +or- 0.04 mg/kg	a) Fatal overdoses b) Fatal overdoses, nordoxepin, (metabolite) c) Deaths by other causes, therapeutic drug involvement d) Deaths by other causes, therapeutic drug involvement, nordoxepin Autopsies, MD MARYLAND; AUTOPSIES; BLOOD; ANTIDEPRESSIVE AGENTS; FORENSIC MEDICINE; DRUGS; DRUG ABUSE; HEART; LIVER; MUSCLES	Hobb, J.H., Jr. Caplan, Y.H. Crooks, C.R. Hargner, W.J. 1982 Journal of Analytical Toxicology 6:209-216
8350 Urine	Ingestion	UV GC	1	Not applicable	1.6 mg/100 ml	Fatal overdose. 35 yr old. Edema, atelectasis and localized areas of congestion SUICIDE; BLOOD; LIVER; URINE; ANTIDEPRESSIVE AGENTS; DRUG ABUSE; DRUGS	Horbein, G. 1973 Archiv fur Toxikologie 31:7-12

Dibenzo(c,f)pyrazino(1,2-a)azepine, 1,2,3,4,10,14b-hexahydro-2-methyl-
24219-97-4
C18-H20-N2
MW 264.37

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8351 Blood, plasma		Chromatography	34	a) 20-169 ng/ml b) 11-150 ng/ml	a) 81 ng/ml b) 53 ng/ml	a) Mianserin b) Desmethylmianserin (metabolite) Steady state levels, patients on fixed dose, 150 mg/day. 4 samples had unmeasurable (5 ng/ml) levels of 8-hydroxymianserin. BLOOD PLASMA; ANTIDEPRESSIVE AGENTS; DRUG THERAPY; DRUGS	Suzhou, R.F. Cooper, T.B. Quithin, F.M. Stewart, J.W. 1982 Journal of Pharmaceutical Sciences 71(8):889-892

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Dibenzo(c,f)pyrazino(1,2-a)azepine, 1,2,3,4,10,14b-hexahydro-2-methyl-
24219-97-4
C18-H20-N2
MW 264.37

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0352 Blood, plasma	Ingestion	GC	9	a) 19-50 ng/ml b) 26-55 ng/ml	a) 31.6 +or- 5.5 ng/ml b) 41.2 +or- 6.2 ng/ml	a) 2 hr after single dose of 30 mg, 21-43 yr olds b) 2 hr after single dose of 30 mg, 64-76 yr olds Peak time earlier in young subjects Depressed patients, no previous psychiatric treatment or use of psychotropic drugs Drowsiness reported more frequently, correlated with maximal plasma levels in young patients. ANTIDEPRESSIVE AGENTS; COMPARATIVE EVALUATIONS; ADULTS; BLOOD PLASMA	Altamura, A.C. Melorio, T. Invernizzi, G. Gomoni, R. 1982 Psychopharmacology 78:380-382

Digitoxin (8 CI)
Card-20(22)-enolide, 3-((O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-2,6-dideoxy-beta-D-ribo-hexopyranosyl)oxy)-14-hydroxy-, (3beta,5beta)- (9 CI)
71-63-6
C41-H64-O13
MW 764.92, MP 256-257 C (anhydrous)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0353 Blood, plasma	Ingestion	RIA	13	a) 11.8-19.2 ng/ml b) 11.1-16.4 ng/ml c) 5.4 -20.4 ng/ml d) 4.3 -19.9 ng/ml e) 5.5 -19.8 ng/ml f) 6.4 1.2-13.7 ng/ml g) 7.3 -9.0 ng/ml h) 6.9 -9.1 ng/ml	a) 13.8 ng/ml b) 13.1 ng/ml c) 14.7 +or- 5.3 ng/ml d) 13.8 +or- 5.3 ng/ml e) 15.6 +or- 4.8 ng/ml f) 6.9 +or- 3.5 ng/ml g) 8.1 +or- 0.8 ng/ml h) 8.6 +or- 1.2 ng/ml	a) 0 and 168 hr after 0.5 mg, 3 cases b) 0 and 168 hr after 0.5 mg plus cytostasa, 3 cases c) Steady-state after 0.1 mg, 6 cases d) Steady-state after 0.1 mg daily plus 1st COPP dose 6 cases e) Steady-state after 0.1 mg daily and 2nd COPP dose, 6 cases f) Steady-state after 0.1 mg, 4 cases g) Steady-state after 0.1 mg, plus 1st COP COAP, 4 cases h) Steady-state after 0.1 mg daily and 2nd COP/COAP dose, 4 cases Mean peaks COPP: 650 mg cyclophosphamide/sq m and 1.4 mg/sq m vincristine COPP: 1.4 mg/sq m vincristine, days 1-5 COAP: 1.4 mg/sq m vincristine day 1 and 100 mg/sq m cyclophosphamide, 100 mg/sq m cytosine-arabinose, 200 mg prednisone on days 1-5 33-77 yr old Hodghin's or malignant non-Hodghin's lymphoma patients with congestive heart failure, maintenance therapy Steady-state digitoxin plasma levels and daily renal excretion unchanged. BLOOD PLASMA; URINE; ANTIARRHYTHMIC AGENTS; DRUG INTERACTION; CHEMOTHERAPY; ADULTS	Kuhlmann, J. Wilke, J. Riethrock, H. 1982 Clinical Pharmacology and Therapeutics 32(5):646-651

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Digitoxin (8 CI)
Card-20(22)-enolide, 3-((O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-2,6-dideoxy-beta-D-ribo-hexopyranosyl)oxy)-14-hydroxy-, (3beta,5beta)- (9 CI)
71-63-6
C41-H64-O13
MP 764.92, MP 256-257 C (anhydrous)

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8354 Urine	Ingestion	RIA	13	a) 48.8-83.9 ug b) 51.8-88.4 ug c) 8.8 +or- 2.6-25.8 +or- 7.7 ug/day d) 9.8 +or- 8.1-31.1 +or- 9.8 ug/day e) 18.1 +or- 2.1-31.7 +or- 8.1 ug/day f) 15.3 +or- 4.6-21.6 +or- 6.1 ug/day g) 15.3 +or- 2.3-20.2 +or- 6.8 ug/day h) 14.5 +or- 1.9-28.2 +or- 7.6 ug/day	a) 63.6 ug b) 75.7 ug c) 18.8 +or- 6.6 ug/day d) 19.1 +or- 7.3 ug/day e) 19.3 +or- 7.1 ug/day e) 19.3 +or- 7.1 ug/day f) 18.4 +or- 2.9 ug/day g) 19.8 +or- 6.8 ug/day h) 17.9 +or- 7.1 ug/day	a) Total excretion 0-168 hr after 0.5 mg, 3 cases b) Total excretion 0-168 hr after 0.5 mg and cytostatic, 3 cases c) Steady-state after 0.1 mg, 6 cases d) Steady-state after 0.1 mg daily plus 1st COPP dose 6 cases e) Steady-state after 0.1 mg daily and 2nd COPP dose, 6 cases f) Steady-state after 0.1 mg, 4 cases g) Steady-state after 0.1 mg plus 1st COP/COAP 4 cases h) Steady-state after 0.1 mg daily and 2nd COP/COAP dose, 4 cases COPP: 650 mg cyclophosphamide/sq m and 1.4 mg/sq m vincristine COP: 1.4 mg/sq m vincristine, day 1-5 COAP: 1.4 mg/sq m vincristine day 1 and 100 mg/sq m cyclophosphamide, 100 mg/sq m cytosine-arabinose, 200 mg prednisone on day 1-5 33-77 yr old Hodgkin's or maligant non-Hodgkin's lymphoma, patients with congestive heart failure on maintenance therapy Steady-state digitoxin plasma levels and daily renal excretion unchanged. BLOOD PLASMA; URINE; ANTIARRHYTHMIC AGENTS; DRUG INTERACTION; CHEMOTHERAPY; ADULTS	Kuhlmann, J. Wilke, J. Riethbrock, H. 1982 Clinical Pharmacology and Therapeutics 32(5):646-651

Digoxin (8 CI)
Card-20(22)-enolide, 3-((O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-2,6-dideoxy-beta-D-ribo-hexopyranosyl)oxy)-12,14-dihydroxy-, (3beta,5beta,12beta)- (9 CI)
20830-75-5
C41-H64-O14
MW 780.92, MP about 265 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0355 Blood	Ingestion	RIA	4	a) Not given b) Not given c) Not given	a) 1.3 ng/ml b) 1.6 ng/ml c) 6.8 ng/ml d) 31.0 ng/ml	a) Deceased 65 yr old, natural death, dose 0.25 mg/day for 5 yr b) Deceased 75 yr old, natural death, dose 0.25 mg/day c) Deceased 85 yr old, probable overdose d) Deceased 60 yr old, overdose of 40-50 tablets Autopsies BLOOD; BRAIN; COMPARATIVE EVALUATIONS; FORENSIC MEDICINE; CALIFORNIA; ADULTS; AUTOPSIES; CASE HISTORIES; DRUGS; DRUG ABUSE; SUICIDE	Spichler, V.R. Sodgwick, P. Richards, R.G. 1981 Journal of Forensic Sciences 26(4):645-658
0356 Blood, plasma	Ingestion	HPLC	1	Not given	0-1 ng/ml	72 and 192 hr after 22 mg. Initially, 6 ng/ml at 48 hr. 22 g chlorpropamide and 4.5 g hydrochlorothiazide ingested simultaneously with digoxin. 19 yr old female Sinus bradycardia 35-45 beats/min with T-wave inversion. ADOLESCENTS; ADULTS; SUICIDE; BLOOD PLASMA; DRUG ABUSE	Weatherall, R.C. Green, P.T. Kanich, S. Dunn, M. 1981 Journal of Analytical Toxicology 5:287-291
0357 Blood, plasma	Ingestion	RIA Uptake inhibition	56	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.87 +or- 0.26 ng/ml b) 0.92 +or- 0.31 ng/ml c) 0.74 +or- 0.24 ng/ml d) 0.80 +or- 0.28 ng/ml e) 0.77 +or- 0.25 ng/ml f) 0.83 +or- 0.31 ng/ml	a) Controls, RIA b) Controls, Rb-86 uptake inhibition assay c) Chronic hepatitis patients, RIA d) Chronic hepatitis patients, Rb-86 uptake inhibition assay e) Liver cirrhosis patients, RIA f) Liver cirrhosis patients, Rb-86 uptake inhibition assay Dose: 0.25 mg/day, 9 days 25-72 yr old hepatitis and cirrhosis patients. Controls, patients with normal liver and kidney function. BLOOD PLASMA; URINE; COMPARATIVE EVALUATIONS; ADULTS; CIRRHOSIS; HEART DISEASES; DRUGS; LIVER DISEASES	Malini, P.S. Sarti, F. Dal Monte, P.R. Crepioni, A. Donthi, S. Ambrosioni, E. 1982 International Journal of Clinical Pharmacological Research 11(1):21-27

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Digoxin (8 CI)
Card-20(22)-enolide, 3-((O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-2,6-dideoxy-beta-D-ribo-hexopyranosyl)oxy)-12,14-dihydroxy-, (3beta,5beta,12beta)- (9 CI)
20830-75-5
C41-H64-O14
MW 780.92, MP about 265 C (decomp)

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0358 Blood, plasma	Injection	RIA	6	a) 21-0.2 ng/ml b) 23-0.22 ng/ml c) 25-0.25 ng/ml	a) Not given b) Not given c) Not given	a) 0 and 78 hr after 15 ug/kg bolus, IV b) 0 and 78 hr after 15 ug/kg bolus, IV and 50 mg triamterene 3x/day for 1 wk before and 4 days after digoxin c) 0 and 78 hr after 15 ug/kg bolus, IV and 100 mg spironolactone 2x/day for 1 wk before and 4 days after digoxin Estimated from graph Healthy 22-29 yr olds Spironolactone reduced renal tubular secretion of digoxin and attenuated its positive inotrophy. Triamterene reduced extra renal elimination with no changes in inotrophy. ADULTS; CARDIOVASCULAR DISEASES; BLOOD PLASMA; DRUGS; COMPARATIVE EVALUATIONS	Waldorff, S. Hansen, P.B. Egeblad, H. Berning, J. Buch, J. Kjaergard, H. Steinnes, E. 1983 Clinical Pharmacology and Therapeutics 33(4):618-623
0359 Blood, serum						Review. Usefulness of serum levels of cardiac drugs in clinical practice. BLOOD SERUM; ANESTHETICS; ANTIARRHYTHMIC AGENTS; ANTIHYPERTENSIVE AGENTS; DIURETICS; DRUGS; STIMULANTS; REVIEW	Peacock, E.E. 1978 American Family Physician 17(4):194-196
0360 Blood, serum						Review. Assessment of clinical use of laboratory determinations for metals, anticonvulsive agents, and cardiovascular drugs. ADULTS; AGE; CHILDREN; ANEMIA; BONE DISEASES; DISEASES; MENTAL RETARDATION; METAL POISONING; NUTRITIONAL DEFICIENCIES; SKIN DISEASES; BLOOD; BLOOD PLASMA; BLOOD SERUM; LIVER; URINE; ANTIARRHYTHMIC AGENTS; ANTICONVULSANTS; DIURETICS; DRUG THERAPY; DRUGS; HYPNOTICS; MUSCLE RELAXANTS; SEDATIVES; TRANQUILIZERS; REVIEW; COPPER; DIAZEPAM; IRON; LEAD; LITHIUM; THEOPHYLLINE; ZINC; PAINTS	Weiss, H.B. Rosenthal, I.M. 1976 Journal of Analytical Toxicology 2:166-171

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Digoxin (8 CI)
Card-20(22)-enolide, 3-((O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-2,6-dideoxy-beta-D-ribo-hexopyranosyl)oxy)-12,14-dihydroxy-,
(3beta,5beta,12beta)- (9 CI)
20830-75-5
C41-H64-O14
MW 780.92, MP about 265 C (decomp)

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8361 Blood, serum	Ingestion	ELISA	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1 g) 1 h) 1	a) 0.55-1.30 ng/ml b) 0.60-0.80 ng/ml c) 1.60-3.10 ng/ml d) 1.10-1.50 ng/ml e) 0.60-2.00 ng/ml f) 0.80-1.65 ng/ml g) 0.70-1.30 ng/ml h) 0.60-1.00 ng/ml	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) Days 1 and 5, 1.20 mg/ml on day 10. b) Days 1 and 8, 0.79 ng/ml on day 10 c) Days 1 and 10 d) Days 5 and 8, 1.20 ng/ml on day e) Days 1 and 8, 1.00 ng/ml on day 10 f) Days 1 and 8, 1.55 ng/ml on day 10 g) Days 3 and 8, 0.80 ng/ml on day 1 h) Days 1 and 5 Dose: 0.1-0.2 mg acetyldigoxin or 0.05-0.1 mg methyldigoxin and 750 mg quinidine/day Anuric patients on hemodialysis for 5-52 months Complete left bundle branch block on day 3 in one patient. Disappeared after discontinuation of quinidine. No new arrhythmias in any patient. Flatulence, diarrhea, constipation, dizziness in some. KIDNEY DISEASES; BLOOD PLASMA; BLOOD SERUM; DRUG INTERACTION; HEMODIALYSIS	Doering, W. Fichtl, B. Herrmann, N. Rosenfelder, E. 1982 European Journal of Clinical Pharmacology 21:281-285
8362 Blood, serum	Ingestion		1	a) Not applicable b) Not applicable	a) >100 ng/ml b) 478 ng/ml	a) Free digoxin, approximately 6 hr after 10 mg, before antibody administration b) Total digoxin, 10 hr after therapy Overdose in 2.5 yr old Somnolence, tachycardia, ventricular fibrillation Hematuria, dysfunction of right bundle branch CHILDREN; BLOOD SERUM; DRUGS; STIMULANTS; ACCIDENTAL POISONING	Zucker, A.R. Lacina, S.J. BasGupta, D.S. Fozzard, H.A. Mehlman, D. Butler, V.P., Jr. Haber, E. Smith, T.W. 1982 Pediatrics 70:468-471

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Digoxin (8 CI)
Card-20(22)-enolide, 3-((O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-2,6-dideoxy-beta-D-ribo-hexopyranosyl)oxy)-12,14-dihydroxy-, (3beta,5beta,12beta)- (9 CI)
20830-75-5
C41-H64-O14
MW 780.92, MP about 265 C (decomp)

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8363 Blood, serum	Ingestion		1	a) Not given b) Not given c) Not given d) Not given	a) 13.6 ng/ml b) 16.7 ng/ml c) >100 ng/ml d) <0.3 ng/ml	a) 2.5 hr after massive dose b) 7 hr after massive dose c) 4 hr after infusion of 960 mg Fab fragments of antibodies (11 hr after dose) d) 12 hr after infusion of 960 mg Fab fragments of antibodies, (19 hr after dose) Potassium 4.7 mEq/l 7 hr after dose 20 month old Irritability, lethargy, b.p. 84/60 mm Hg, pulse 120 beats/min at 2.5 hr after dose. B.P. 95/60 mm Hg, pulse 80 beats/min and irregular at 7 hr after dose. 1st- and 2nd-degree atrioventricular block, 2nd-degree sinoatrial block. No physical or electrocardiographic abnormalities, no serum-sickness reaction 3 wk after dose. POISONING; OHIO; CHILDREN; BLOOD SERUM; ANTIARRHYTHMIC AGENTS; DRUGS; BLOOD PRESSURE	Murphy, D.J., Jr. Brenner, W.P. Haber, E. Butler, V.P., Jr. Smith, T.W. Gaum, W.E. 1982 Pediatrics 70(3):472-473
8364 Brain	Ingestion	RIA	a) 6 b) 3 c) 4 d) 4 e) 4 f) 3	a) 0-3.5 ng/g b) 0.6-4.7 ng/g c) 0-6.8 ng/g d) 0-10.0 ng/g e) 1.1-38.0 ng/g f) 2.2-105.0 ng/g	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) Optic tract b) Optic chiasm c) Lateral geniculate nucleus d) Area postrema e) Choroid plexus, lateral ventricle f) Choroid plexus, fourth ventricle Highest levels in two overdose cases (blood levels 6.8 and 31 ng/ml) 60-85 yr olds BLOOD; BRAIN; COMPARATIVE EVALUATIONS; FORENSIC MEDICINE; CALIFORNIA; ADULTS; AUTOPSIES; CASE HISTORIES; DRUGS; DRUG ABUSE; SUICIDE	Spiehler, V.R. Sedgwick, P. Richards, R.G. 1981 Journal of Forensic Sciences 26(4):645-650

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Digoxin (8 CI)
Card-20(22)-enolide, 3-((O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-2,6-dideoxy-beta-D-ribo-hexopyranosyl)oxy)-12,14-dihydroxy-, (3beta,5beta,12beta)- (9 CI)
20830-75-5
C41-H64-O14
MW 780.92, MP about 265 C (decomp)

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0365 Milk						Review. General pharmacological principles associated with excretion of drugs and chemicals in human milk. PENNSYLVANIA; UNITED STATES; ADULTS; INFANTS; MILK; SALIVA; URINE; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTICOAGULANTS; ANTIPYRETICS; DIURETICS; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; CAFFEINE; NICOTINE; PESTICIDES; SODIUM; THEOPHYLLINES; ALCOHOLIC BEVERAGES; LACTATION; METABOLISM; METABOLITES; TOBACCOS	Berlin, C.M., Jr. 1981 Obstetrics and Gynecology 58(5)(supplement):17S-23S
0366 Vitreous humor	Ingestion	RIA	1	Not given	5.0 ng/ml	Suicide victim. Overdose of 40-50 Lanoxin tablets. Blood level 31 ng/ml 60 yr old BLOOD; BRAIN; COMPARATIVE EVALUATIONS; FORENSIC MEDICINE; CALIFORNIA; ADULTS; AUTOPSIES; CASE HISTORIES; DRUGS; DRUG ABUSE; SUICIDE	Spiehler, V.R. Sedgwick, P. Richards, R.G. 1981 Journal of Forensic Sciences 26(4):645-656

Ergotamine, dihydro- monomethanesulfonate (salt)
6067-26-1
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0367 Blood, plasma	Injection Ingestion	RIA	a) 8 b) 8	a) 9-0.03 ng/ml b) 6-0.05 ng/ml	a) Not given b) Not given	a) Initial level and 36 hr after 0.6 mg, IV. Mean AUC = 5630 pg/ml:hr b) At 1.5 and 36 hr after 6.8 mg, oral. Initial level 0.15 ng/ml. Mean AUC 3600 pg/ml:hr Range of means, estimated from graph Healthy 21-30 yr olds BLOOD PLASMA; AUTONOMIC DRUGS; DRUGS	Woodcock, B.G. Loh, W. Rehbaum, W.-D. Riethbrock, H. 1982 Clinical Pharmacology and Therapeutics 32(5):622-627

Erythromycin
114-07-8
C37-H67-N-O13
MW 733.92, MP 135-140 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0368 Blood, serum	Ingestion	Microbiological	a) 1 b) 1	a) 2.0-0.2 ug/ml b) 5.0-0.3 ug/ml	a) Not given b) Not given	a) 4 and 12 hr after 500 mg. Initial measurement 0.4 ug/ml at 3 hr after dose, patient b) 4 and 12 hr after 300 mg. Initial measurement 0.9 ug/ml at 1.5 hr after dose, control Estimated from graph Patient with liver disease and control subject ADULTS; CIRRHOSIS; LIVER DISEASES; BLOOD SERUM; ANTIBIOTICS; COMPARATIVE EVALUATIONS; ALCOHOLS	Hall, K.W. Nightingale, C.H. Gibaldi, M. Nelson, E. Bates, T.R. Di Santo, A.R. 1982 Journal of Clinical Pharmacology 22:321-325
0369 Blood, serum	Ingestion	Microbiological	a) 6 b) 8	a) 0.85-2.93 ug/ml b) 0.99-4.16 ug/ml	a) 1.58 +or- 0.91 ug/ml b) 2.84 +or- 1.13 ug/ml	a) Normal subjects, mean of 6.3 +or- 0.8 hr after dose b) Alcoholic liver disease patients, mean of 4.1 +or- 1.2 hr after dose Peaks after 300 mg, oral. Significant difference in peak times ($p<0.05$) Normal subjects, mean age 30 yr, wt 83 kg, and subjects with alcoholic liver disease, mean age 57.2 yr, wt 82.2 kg LIVER DISEASES; BLOOD SERUM; ANTIBIOTICS; DRUGS; ERYTHROMYCIN;	Kroboth, P.D. Brown, A. Lyon, J.A. Kroboth, F.J. Juhl, R.P. 1982 Antimicrobial Agents and Chemotherapy 21(1):135-140

Ethane, 1,1-dichloro-2-(o-chlorophenyl)-2-(p-chlorophenyl)- (8 CI)
Benzene, 1-chloro-2-(2,2-dichloro-1-(4-chlorophenyl)ethyl)- (9 CI)
53-19-0
C14-H10-Cl4
MW 320.05, MP 76-78 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8370 Adipose		GC	20	a) 680-7,205 ug/g b) 12.5-6,700 ug/g c) 11.0-5,046 ug/g Wet wt	a) Not given b) Not given c) Not given	a) Biopsy, subcutaneous tissue, on oral chemotherapy for 9-1,123 days, 10 cases b) Autopsy, subcutaneous tissue, chemotherapy for 32-1,050 days, 10 cases c) Autopsy, mesenteric tissue, chemotherapy for 32-1,050 days, 9 cases Correlated with levels in plasma, lung, kidney, adrenal, liver, and brain. Metastatic adrenocortical carcinoma patients CARCINOMAS; AUTOPSIES; ADIPOSE TISSUE; ADRENAL GLANDS; BLOOD PLASMA; BRAIN; KIDNEYS; LIVER; LUNGS; DRUG THERAPY; DRUGS; BIOPSIES; CHEMOTHERAPY; ANTITUMOR AGENTS	Slooten, H.V. van Seters, A.P. Smeenk, D. Hoelenaar, A.J. 1982 Cancer Chemotherapy and Pharmacology 9:85-88
8371 Adrenal gland		GC	5	0.5-735 ug/g Wet wt	Not given	Chemotherapy for 55-250 days. Correlated with levels in adipose. Autopsies Metastatic adrenocortical carcinoma patients CARCINOMAS; AUTOPSIES; ADIPOSE TISSUE; ADRENAL GLANDS; BLOOD PLASMA; BRAIN; KIDNEYS; LIVER; LUNGS; DRUG THERAPY; DRUGS; BIOPSIES; CHEMOTHERAPY; ANTITUMOR AGENTS	Slooten, H.V. van Seters, A.P. Smeenk, D. Hoelenaar, A.J. 1982 Cancer Chemotherapy and Pharmacology 9:85-88
8372 Blood, plasma		GC	a) 10 b) 7	a) 3.7-24.5 ug/ml b) 5-24.1 ug/ml	a) Not given b) Not given	a) Oral chemotherapy for 9-1,123 days. Sampled at least 10 hr after dose b) Chemotherapy for 32-1,050 days. Levels in week before death Correlated with levels in adipose and brain. Metastatic adrenocortical carcinoma patients CARCINOMAS; AUTOPSIES; ADIPOSE TISSUE; ADRENAL GLANDS; BLOOD PLASMA; BRAIN; KIDNEYS; LIVER; LUNGS; DRUG THERAPY; DRUGS; BIOPSIES; CHEMOTHERAPY; ANTITUMOR AGENTS	Slooten, H.V. van Seters, A.P. Smeenk, D. Hoelenaar, A.J. 1982 Cancer Chemotherapy and Pharmacology 9:85-88

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Ethane, 1,1-dichloro-2-(o-chlorophenyl)-2-(p-chlorophenyl)- (8 CI)
Benzene, 1-chloro-2-(2,2-dichloro-1-(4-chlorophenyl)ethyl)- (9 CI)
53-19-0
C14-H10-Cl4
MW 320.05, MP 76-78 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0373 Brain		GC	8	3.5-56 ug/g Wet wt	Not given	Chemotherapy for 110-1,050 days. Correlated with levels in adipose and plasma. Autopsies Metastatic adrenocortical carcinoma patients CARCINOMAS; AUTOPSIES; ADIPOSE TISSUE; ADRENAL GLANDS; BLOOD PLASMA; BRAIN; KIDNEYS; LIVER; LUNGS; DRUG THERAPY; DRUGS; BIOPSIES; CHEMOTHERAPY; ANTITUMOR AGENTS	Slooten, H.V. van Seters, A.P. Smoenk, D. Hoelenaar, A.J. 1982 Cancer Chemotherapy and Pharmacology 9:85-88
0374 Kidney		GC	6	9-45 ug/g Wet wt	Not given	Chemotherapy for 55-1,050 days. Correlated with levels in adipose. Autopsies Metastatic adrenocortical carcinoma patients CARCINOMAS; AUTOPSIES; ADIPOSE TISSUE; ADRENAL GLANDS; BLOOD PLASMA; BRAIN; KIDNEYS; LIVER; LUNGS; DRUG THERAPY; DRUGS; BIOPSIES; CHEMOTHERAPY; ANTITUMOR AGENTS	Slooten, H.V. van Seters, A.P. Smoenk, D. Hoelenaar, A.J. 1982 Cancer Chemotherapy and Pharmacology 9:85-88
0375 Liver		GC	7	a) 9.5-97 ug/g b) 2.2-139 ug/g Wet wt	a) Not given b) Not given	a) Autopsies. Chemotherapy for 55-560 days, 6 cases b) Autopsies, liver metastases. Chemotherapy for 120-900 days, 5 cases Correlated with levels in adipose Metastatic adrenocortical carcinoma patients CARCINOMAS; AUTOPSIES; ADIPOSE TISSUE; ADRENAL GLANDS; BLOOD PLASMA; BRAIN; KIDNEYS; LIVER; LUNGS; DRUG THERAPY; DRUGS; BIOPSIES; CHEMOTHERAPY; ANTITUMOR AGENTS	Slooten, H.V. van Seters, A.P. Smoenk, D. Hoelenaar, A.J. 1982 Cancer Chemotherapy and Pharmacology 9:85-88

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Ethane, 1,1-dichloro-2-(o-chlorophenyl)-2-(p-chlorophenyl)- (8 CI)
Benzene, 1-chloro-2-(2,2-dichloro-1-(4-chlorophenyl)ethyl)- (9 CI)
53-19-0
C14-H10-Cl4
MW 320.05, MP 76-78 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0376 Lung		GC	7	a) 2.0-40 ug/g b) 18.6-141 ug/g Wet wt	a) Not given b) Not given	a) Autopsies. Chemotherapy for 55-560 days, 5 cases b) Autopsies. Lung metastases. Chemotherapy for 110-900 days, 4 cases Correlated with levels in adipose. Metastatic adrenocortical carcinoma patients CARCINOMAS; AUTOPSIES; ADIPOSE TISSUE; ADRENAL GLANDS; BLOOD PLASMA; BRAIN; KIDNEYS; LIVER; LUNGS; DRUG THERAPY; DRUGS; BIOPSIES; CHEMOTHERAPY; ANTITUMOR AGENTS	Slooten, H.V. van Seters, A.P. Smeenk, D. Moolenaar, A.J. 1982 Cancer Chemotherapy and Pharmacology 9:85-88

Ethanol, 2,2',2'',2'''-((4,8-dipiperidinopyrimido(5,4-d)pyrimidine-2,6-diyl)dinitrilo)tetra- (8 CI)
Ethanol, 2,2',2'',2'''-((4,8-di-1-piperidinylpyrimido(5,4-d)pyrimidine-2,6-diyl)dinitrilo)tetrakis- (9 CI)
58-32-2
C24-H40-N8-O4
MW 504.62, MP 163 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0377 Blood, plasma	Injection Ingestion	HPLC	3	a) 1.0-0.002 ug/ml b) 1.5-0.03 ug/ml c) 0.003-0.45 ug/ml	a) Not given b) Not given c) Not given	a) Initial level and 57 hr after 20 mg IV, man b) Initial level and 59 hr after 20 mg IV, woman. Secondary rise and decline (0.03-0.01 ug/ml) at 10 and 36 hr after dose c) 0.5 and 3 hr after 50 mg oral dose, woman. Level 0.006 ug/ml at 48 hr Estimated from graph Healthy subjects ADULTS; CARDIOVASCULAR DISEASES; BLOOD; BLOOD PLASMA; COMPARATIVE EVALUATIONS; DRUGS	Mahony, C. Wolfram, K.H. Cocchetto, D.M. Bjornsson, T.D. 1982 Clinical Pharmacology and Therapeutics 30(3):330-338

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Ethanol, 2,2',2'',2'''-((4,8-dipiperidinopyrimido(5,4-d)pyrimidine-2,6-diyl)dinitrilo)tetra- (8 CI)
Ethanol, 2,2',2'',2'''-((4,8-di-1-piperidinylpyrimido(5,4-d)pyrimidine-2,6-diyl)dinitrilo)tetrakis- (9 CI)
16-32-3
C28-H40-N8-O4
MW 544.62, MP 163 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8378 Blood, whole	Injection Ingestion	HPLC	3	a) 1.2-0.002 ug/ml b) 1.3-0.02 ug/ml c) 0.0025-0.25 ug/ml	a) Not given b) Not given c) Not given	a) Initial level and 97 hr after 20 mg IV, man b) Initial level and 55 hr after 20 mg IV, woman. Secondary rise and decline (0.04-0.01 ug/ml) at 10 and 30 hr after dose c) 0.5 and 3 hr after 50 mg oral dose, woman. Level 0.01 ug/ml at 48 hr Estimated from graph Healthy subjects ADULTS; CARDIOVASCULAR DISEASES; BLOOD; BLOOD PLASMA; COMPARATIVE EVALUATIONS	Mahony, C. Wolfram, K.H. Cocchetto, D.M. Bjornsson, T.D. 1982 Clinical Pharmacology and Therapeutics 30(3):330-338

Ethyl alcohol (8 CI)
Ethanol (9 CI)
64-17-5
C2-H6-O
MW 46.07, MP -117.3 C, BP 78.32 C, VP 40 mm Hg at 19 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0379 Blood			50,712	a) Not given b) Not given c) Not given	a) >0.05 g/100 ml b) >0.10 g/100 ml c) >0.15 g/100 ml	a) 20.5% drivers, 17.9% non-drivers, 27.4% male drivers, 9.2% females drivers, 18.7% drivers attending city hospitals, 25.0% drivers attending rural hospitals b) 15.7% drivers, 11.0% non-drivers, 21.7% male drivers, 6.6% female drivers, 14.1% drivers attending city hospitals, 19.7% drivers attending rural hospitals c) 9.0% drivers, 6.4% non-drivers, 13.0% male drivers, 3.7% female drivers, 8.0% drivers attending city hospitals, 12.4% drivers attending rural hospitals 41,307 drivers, 9,405 non-drivers 15,579 males, 7,704 females, data from 1970-79 only 29,497 drivers attending city hospitals, 11,796 drivers attending rural hospitals Results compared to 1970-77 data Road crash casualties, 15 yr or older, reporting to public hospitals 1970-80, Victoria, Australia AUSTRALIA; BLOOD; DRUG ABUSE; DRUGS; FORENSIC MEDICINE; ALCOHOLS; ALCOHOLIC BEVERAGES; RURAL AREAS; URBAN AREAS	McDermott, F.T. Hughes, E.S.R. 1982 Medical Journal of Australia 1:294-296
0380 Blood	Ingestion		1	a) 0.65-0 mg/ml b) 0.4-0 mg/ml c) 0.2-0 mg/ml d) 0.05-0 mg/ml	a) Not given b) Not given c) Not given d) Not given	a) 1.75 and 6 hr after 60 ml b) 1.5 and 4.75 hr after 45 ml c) 1 and 3.5 hr after 30 ml d) 0.333 and 1.167 hr after 15 ml 95% alcohol with 150 ml orange juice after overnight fast Capillary blood Estimated from graph Volunteers BLOOD; DRUGS; ALCOHOLS; ALCOHOLIC BEVERAGES	Wagner, J.G. Wilkinson, P.K. Sedman, A.J. Kay, D.R. Gaidler, D.J. 1976 Journal of Pharmaceutical Sciences 65(1):152-154

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Ethyl alcohol (8 CI)
Ethanol (9 CI)
64-17-5
C2-H6-O
MW 46.07, MP -117.3 C, BP 78.32 C, VP 40 mm Hg at 19 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0301 Blood	Ingestion	Alcolmeter	20	a) 0.93-0.70 mg/ml b) 0.99-0.65 mg/ml c) 1.22-1.03 mg/ml d) 1.00 - 1.04 mg/ml e) 0.57-0.37 mg/ml f) 0.50-0.30 mg/ml	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) Dose 1 g/kg, 45 and 100 min after 250 ml decaffeinated coffee b) Dose 1 g/kg, 45 and 100 min after 250 ml decaffeinated coffee plus 200 mg caffeine c) Dose 1.5 g/kg, 90 and 100 min after 250 ml decaffeinated coffee plus 500 mg caffeine. Initial measurement 1.03 mg/ml 45 min after dose d) Dose 1.5 g/kg, 90 and 100 min after 250 ml decaffeinated coffee. Initial measurement 1.02 mg/ml 45 min after dose e) Dose 0.7 g/kg, 90 and 100 min after 250 ml decaffeinated coffee and 2 successive doses of 250 mg each caffeine. Initial measurement 0.52 mg/ml 45 min after dose f) Dose 0.7 g/kg, 90 and 100 min after 250 ml decaffeinated coffee. Initial measurement 0.42 mg/ml 45 min after dose Estimated from graph Healthy students, ages 20-23 yr BEHAVIOR DISORDERS; ADULTS; ALCOHOLIC BEVERAGES; CAFFEINE; BLOOD; COMPARATIVE EVALUATIONS; ALCOHOLS; DRUGS	Mustto, R. Mattila, M.J. Seppala, T. Ronne, E. 1982 Clinical Pharmacology and Therapeutics 31(1):68-76
0302 Blood	Ingestion	GC	15	a) 0.03-0.01% b) 0.06-0.02% c) 010-0.06%	a) Not given b) Not given c) Not given	a) Dose 0.5 g/kg b) Dose 0.8 g/kg c) Dose 1.2 g/kg 20 and 240 min after dose. Plateau at 2H min Estimated from graph. Peak impairment of psychomotor task at 60 min. Healthy 21-26 yr olds, within 10% of ideal ht/wt ratios ADULTS; BLOOD; BLOOD PLASMA; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; TRANQUILIZERS; ALCOHOLS; DIAZEPAM; ALCOHOLIC BEVERAGES; METABOLITES	Ellinwood, E.H. Linnoila, M. Easler, H.H. Holter, D.W. 1981 Clinical Pharmacology and Therapeutics 30(4):534-538

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Ethyl alcohol (8 CI)
Ethanol (9 CI)
64-17-5
C2-H6-O
MW 46.07, MP -117.3 C, BP 78.32 C, VP 40 mm Hg at 19 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8303 Blood		GC	a) 110 b) 33 c) 69 d) 54 e) 92	a) 0.046-0.697 g/100 ml b) 0.072-0.388 g/100 ml c) 0.046-0.697 g/100 ml d) 0.046-0.697 g/100 ml e) 0.046-0.697 g/100 ml	a) Not given b) Not given c) Not given d) Not given e) Not given	a) Ratio blood alcohol/vitreous fluid 1.85 b) Ratio blood alcohol/brain 0.86 c) Ratio blood alcohol/bile 0.98 d) Ratio blood alcohol/spinal fluid 1.14 e) Ratio blood alcohol/urine 1.16 Fluid-tissue/blood alcohol ratios used when blood alcohol must be estimated. Estimates more accurate when stomach alcohol is less than 0.5 g/100 ml Autopsies BILE; BLOOD; BRAIN; EYE; SPINAL FLUID; URINE; FORENSIC MEDICINE; ALCOHOLS; ALCOHOLIC BEVERAGES; AUTOPSIES; HUMAN	Becker, H.C. Pisano, R.V. Gopher, I.M. 1980 Journal of Forensic Sciences 25(2):327-331
8304 Blood	Ingestion	GC	a) 24 b) 58 c) 16 d) 4	a) 0.74-0.42 mg/ml b) 0.71-0.57 mg/ml c) 0.38-0.23 mg/ml d) 0.16-0.02 mg/ml	a) Not given b) Not given c) Not given d) Not given	a) 60 and 150 min after 0.8 g/kg. Ojibwa men b) 90 and 150 min after 0.8 g/kg. Caucasians. Initial measurement 0.67 mg/ml at 60 min c) 60 and 150 min after 0.6 g/kg. Chinese d) 60 and 150 min after 0.4 g/kg. Chinese Estimated from graph Healthy 18-33 yr olds. Caucasians and Chinese from Toronto, Canada. Ojibwa Indians from Kenora, Ontario. Caucasians were Jewish and non-Jewish. BLOOD; HUMAN; COMPARATIVE EVALUATIONS; ALCOHOLS; CANADA; RACIAL STUDIES; METABOLISM	Reed, T.E. Kalant, H. Gibbins, R.J. Kapur, B.M. Rankin, J.G. 1976 Canadian Medical Association Journal 115(9):851-855

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Ethyl alcohol (8 CI)
Ethanol (8 CI)
64-17-5
C2-H6-O
MW 46.07, MP -117.3 C, BP 78.32 C, VP 40 mm Hg at 19 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8385 Blood	Injection Ingestion	GC	18	a) 88-31 mg/dl b) 61-15 mg/dl c) 68-31 mg/dl	a) Not given b) Not given c) Not given	a) 45 and 220 min after 0.5 g/kg b) 75 and 285 min after 0.5 g/kg. Followed by 1.0 g moxalactam, IV c) 85 and 230 min after 0.5 g/kg. Preceded by 1.0 g moxalactam/8 hr, 4 doses, IV Estimated from graph Healthy Caucasians, 22-27 yr old No consistent moxalactam effect on ethanol or acetaldehyde elimination. 2 subjects experienced elevated blood acetaldehyde after moxalactam pretreatment. ANTIBIOTICS; COMPARATIVE EVALUATIONS; ALCOHOLS; ADULTS; BLOOD; DRUGS	Eisenbeis, H.H. Ryan, J.L. Robinson, W.A. Singsank, M.J. Harvey, H.J. Klassen, C.D. 1982 Clinical Pharmacology and Therapeutics 32(3):347-355
8386 Blood	Ingestion		1	Not applicable	2250 mg/l	Overdose of indormin (2500 mg), ethanol dose unknown 43 yr old patient Unconsciousness, areflexia, respiratory depression, metabolic acidosis, hypotension, tachycardia, coma, convulsions, bradyarrhythmia, cardiac arrest, death SCOTLAND; ADULTS; SUICIDE; HYPERTENSION; BLOOD; ANTIHYPERTENSIVE AGENTS; DRUG ABUSE; DRUGS; LAVAGE; ALCOHOLS; DIAZEPAM	Hunter, R. 1982 British Medical Journal 285:1011
8387 Blood, plasma	Ingestion	GC	a) 1 b) 1	a) 130-45 mg/100 ml b) 70-30 mg/100 ml	a) Not given b) Not given	a) Obese subject (wt 137.4 kg) after 75,000 mg b) Slender subject (wt 61.2 kg) after 36,300 mg b) 90 and 270 min after pure ethanol Rate of metabolism per unit body wt similar in a) and b) Rate of metabolism in 30 American Indians and 30 whites virtually identical Estimated from graph PRISONS; ADULTS; RACIAL STUDIES; BLOOD PLASMA; ALCOHOLS; ALCOHOLIC BEVERAGES; METABOLISM	Bennion, L.J. Li, T.K. 1976 New England Journal of Medicine 294(1):9-13

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Ethyl alcohol (8 CI)
Ethanol (9 CI)
64-17-5
C2-H6-O
MW 46.07, MP -117.3 C, BP 78.32 C, VP 40 mm Hg at 19 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0388 Blood, serum	Ingestion	GC	1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 1510 mg/dl b) 1407 mg/dl c) 1217 mg/dl d) 371 mg/dl	a) At admission b) Sample 2 c) Sample 3 d) Sample 4 Treated with intravenous fluids, electrolyte replacement, chlordiazepoxide. 24 yr old, drank as much as 750 ml hard liquor/day. No alcohol 3 days before admission. CA Agitated, slightly confused, tachycardia, tender abdomen, slightly depressed reflexes, respiratory acidosis. Symptom-free after 2 days. CALIFORNIA; BLOOD SERUM; ALCOHOLS; ALCOHOLIC BEVERAGES	Johnson, R.A. Moll, H.C. Rodney, W.M. 1982 Lancet 2(8312):1394
0389 Milk						Review. General pharmacological principles associated with excretion of drugs and chemicals in human milk. PENNSYLVANIA; UNITED STATES; ADULTS; INFANTS; MILK; SALIVA; URINE; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTICOAGULANTS; ANTIPYRETICS; DIURETICS; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; CAFFEINE; NICOTINE; PESTICIDES; SODIUM; THEOPHYLLINES; ALCOHOLIC BEVERAGES; LACTATION; METABOLISM; METABOLITES; TOBACCOS	Berlin, C.M., Jr. 1981 Obstetrics and Gynecology 58(5)(supplement):17S-23

Ethylamine, 2-(diphenylmethoxy)-N,N-dimethyl-, hydrochloride (8 CI)
Ethanamine, 2-(diphenylmethoxy)-N,N-dimethyl-, hydrochloride
147-24-0
C17-H21-N-O.Cl-H
MW 291.8, MP 166-170 C, also reported as 169-172 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8350 Blood, plasma	Injection Ingestion	Chem	6	a) 175-55 ng/ml b) 80-30 ng/ml	a) Not given b) Not given	a) 1 and 8 hr after 50 mg/70 kg, IV b) 1 and 8 hr after 50 mg/70 kg, oral Caucasian volunteers, 65-81 yr old Clearance, half-life and volume of distribution were of same order as in young adults. Minimal psychomotor impairment after oral and IV dose. Elderly women did not report significant sedation. AGE; ANTIHISTAMINES; COMPARATIVE EVALUATIONS; ADULTS; BLOOD PLASMA	Berlinger, W.G. Goldberg, M.J. Spector, R. Chiang, C-E. Ghoneim, M.M. 1982 Clinical Pharmacology and Therapeutics 32(3):387-391

Ferritins
9007-73-2
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8391 Blood, serum			51	a) Not given b) Not given c) Not given	a) <10 ng/ml b) 10-20 ng/ml c) >20 ng/ml	a) 64.7% before fortification, 21.6% after fortification (significantly different ($p<0.05$ or better)) b) Before 23.5%, after 58.8% c) Before 11.8%, after 19.6% % children at respective level before and 2 yr after fortification of sugar resulting in 3-fold increase in mean daily intake vitamin A No change in Fe intake during study period (63% families below recommended level) Vitamin A fortification favorably affected Fe metabolism and nutritional status Preschool children, 1-5 yr old, 12 small rural communities, October-November 1975 and 1977, Guatemala GUATEMALA; CHILDREN; NUTRITIONAL DEFICIENCIES; BLOOD SERUM; IRON; METALS; VITAMIN A; DIETS; FOOD ADDITIVES; METABOLISM; METABOLITES; RURAL AREAS	Mejia, L.A. Arroyave, G. 1982 American Journal of Clinical Nutrition 36:87-93

Fluoride
16984-48-8
F
ALW 18.9984

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8392 Blood, plasma	Ingestion	IEE	6	a) 65-98 ng/ml b) 73-105 ng/ml	a) Not given b) Not given	a) Protein-rich diet b) Vegetarian diet 3 mg fluoride as NaF tablets every 6 hr for 60 hr Range of peaks during capillary blood sampling every 3 hr for 72 hr Estimated from graph Healthy 21-23 yr olds, 55-70 kg ADULTS; BLOOD PLASMA; URINE; FLUORIDE; DIETS	Ekstrand, J. Spak, C.J. Ehrnebo, M. 1982 Acta Pharmacologica et Toxicologica 50:321-325
8393 Urine	Ingestion	IEE	6	a) 1260-1497 ug b) 1470-1940 ug	a) 1392 +or- 111 ug b) 1609 +or- 222 ug	a) Protein-rich diet, acid urine (mean pH 5.64) b) Vegetarian diet, alkaline urine (mean pH 6.74) 3 mg as NaF tablets every 6 hr for 60 hr 6-hr steady state output (12-60 hr) Range of individual means a) and b) not significantly different Healthy 21-23 yr olds, 55-70 kg ADULTS; BLOOD PLASMA; URINE; FLUORIDE; DIETS	Ekstrand, J. Spak, C.J. Ehrnebo, M. 1982 Acta Pharmacologica et Toxicologica 50:321-325

Gentamicin
1403-66-3
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
MF 102-160 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0394 Blood, plasma	Injection	Enzymatic	7	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 9.5 +or- 1.0 ug/ml b) 10.5 +or- 2.8 ug/ml c) 6.0 +or- 1.6 ug/ml d) 7.4 +or- 2.0 ug/ml e) 3.4 +or- 1.0 ug/ml f) 5.1 +or- 1.4 ug/ml S.E.	a) 30 min after 80 mg b) 30 min after 80 mg plus 40 g furosemide c) 60 min after 80 mg d) 60 min after 80 mg plus 40 mg furosemide e) 90 min after 80 mg f) 90 min after 80 mg plus 40 mg furosemide Patients with normal renal function, mean age 65 yr, Scotland Fall in glomerular filtration rate after furosemide dose accompanied by fall in plasma gentamicin clearance SCOTLAND; ADULTS; BLOOD PLASMA; DRUG THERAPY; COMPARATIVE EVALUATIONS; DIURETICS; ANTIBIOTICS; UNITED KINGDOM; DRUGS	Lawson, D.H. Tilstone, W.J. Gray, J.M.B. Srivastava, P.K. 1982 Journal of Clinical Pharmacology 22:254-258

Glucitol, 1,4:3,6-dianhydro-, dinitrate, D- (8 CI)
D-Glucitol, 1,4:3,6-dianhydro-, dinitrate (9 CI)
87-33-2
C6-H8-N2-O8
MW 236.14, MF 70 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0395 Blood, plasma	Ingestion	GC	2	Not given	0.7 ug/ml	Peak, 0.5 hr after 5 mg Healthy 18-26 yr olds, wt 58-87 kg DOGS; METABOLITES; BLOOD; BLOOD PLASMA; ANTIHYPERTENSIVE AGENTS; AUTONOMIC DRUGS; DRUGS	Waller, A.R. Chasseaud, L.F. Bonn, R. Taylor, T. Darragh, A. Girkin, R. Down, W.H. Doyle, E. 1982 Drug Metabolism and Disposition 10(1):51-54

Glutamic acid, N-(p-(((2,4-diamino-6-pteridinyl)methyl)methylamino)benzoyl)-, L-(+)- (8 CI)
L-Glutamic acid, N-(4-(((2,4-diamino-6-pteridinyl)methyl)methylamino)benzoyl)- (9 CI)
59-05-2
C20-H22-N8-O5
MW 454.46, MP 185 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0396 Blood, plasma	Injection	Competitive binding assay	15	0.6-9 uM	Not given	24 hr after 12 hr IV, 1500 mg/sq m on day 14 of chemotherapy 28-74 yr olds with lymphoma ADULTS; NEOPLASMS; BLOOD PLASMA; ANTITUMOR AGENTS; CHEMOTHERAPY	Kerr, I.G. Jolivet, J. Collins, J.M. Drake, J.C. Chabner, B.A. 1983 Clinical Pharmacology and Therapeutics 33(1):46-51
0397 Blood, serum	Injection	HPLC	a) 5 b) 11 c) 6 d) 5 e) 11 f) 6	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 1500X10(E-7) M b) 70X10(E-7) M c) 9X10(E-7) M d) 500X10(E-7) M e) 100X10(E-7) M f) 40X10(E-7) M	a) At end of 6 hr infusion of 3500-5000 mg/sq m b) 12 hr after 6 hr infusion of 3500-5000 mg/sq m c) 24 hr after 6 hr infusion of 3500-5000 mg/sq m d) Metabolite, 7-hydroxymethotrexate at end of 6 hr infusion of 3500-5000 mg/sq m e) Metabolite, 7-hydroxymethotrexate hr after 6 hr infusion of 3500-5000 mg/sq m f) Metabolite, 7-hydroxymethotrexate 24 hr after 6 hr infusion of 3500-5000 mg/sq m Estimated from graph Patients BLOOD SERUM; COMPARATIVE EVALUATIONS; MEASUREMENT METHODS	Selen, E.G. Sidhu, P. 1982 Journal of Pharmaceutical Sciences 71(1):76-78

Glycerol (8 CI)
1,2,3-Propanetriol (9 CI)
56-81-5
CJ-HH-03
MW 92.09, MP 17.9 C (also reported as +19.8 C), BP 290 C, VP 0.0025 mm Hg at 50 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0398 Blood, plasma	Injection	GC	12	0-48 mg/ml	Not given	Positive correlation with reduction of intracranial pressure (ICP) and idiogenic osmolality. 1-3 mg/ml (10-30 mOsm/ml) necessary to maintain an ICP below 20 torr. 5 mo-15 yr olds with cerebral edema, Children's Hospital of Pittsburgh OSMOLALITY; PENNSYLVANIA; CHILDREN; CENTRAL NERVOUS SYSTEM DISEASES; BLOOD PLASMA; DRUGS	Pitlick, W.H. Pirikitakuhlr, P. Pointer, H.J. Wessel, H.B. 1982 Clinical Pharmacology and Therapeutics 31(4):466-471

Gold
7440-57-5
Au
AtW 196.9665, MP 1064.76 C, BP 2700 C, VP 1 mm Hg at 1869 C, 10 mm Hg at 2160 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0399 Blood, plasma	Injection	NA	2	a) 1-0.06 ug/ml b) 0.9-0.08 ug/ml c) 0.6-0.01 ug/ml d) 1-0.06 ug/ml	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) Initial measurement and 28 days after 5 mg, IV b) Same subject, initial measurement and 26 days after 10 mg, IM c) Initial measurement and 28 days after 5 mg, IV d) Same subject, initial measurement and 30 days after 10 mg, IM Dose as gold sodium thiomalate. Healthy 24 yr olds, wt 67 and 70 kg ADULTS; BLOOD PLASMA; URINE; DRUGS; GOLD; METALS	Waller, E.E. Mazzerella, J.W. Crout, J.E. Yakatan, G.J. 1982 Research Communications in Chemical Pathology and Pharmacology 37(1):33-47
0400 Urine	Injection	NA	2	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 48% of dose b) 10% of dose c) 25.8% of dose d) 28.2% of dose	a) Subject 1, after 5 mg, IV b) Subject 2, after 5 mg, IV c) Subject 1, after 10 mg, IM d) Subject 2, after 10 mg, IM Dose as gold sodium thiomalate. Values represent % of dose recovered in 10 days. Healthy 24 yr olds, wt 67 and 70 kg ADULTS; BLOOD PLASMA; URINE; DRUGS; GOLD; METALS	Waller, E.E. Mazzerella, J.W. Crout, J.E. Yakatan, G.J. 1982 Research Communications in Chemical Pathology and Pharmacology 37(1):33-47

Guanidine, N-cyano-N'-methyl-N''-(2-(((5-methyl-1H-imidazol-4-yl)methyl)thio)ethyl)-
51481-61-9
C10-H16-N6-S
MW 252.38

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0401 Blood, plasma	Injection	HPLC	6	a) 2.34-3.22 ug/ml b) 0.70-1.40 ug/ml c) 0.49-1.10 ug/ml d) 0.29-0.85 ug/ml	a) 2.74 +or- 0.12 ug/ml b) 1.08 +or- 0.10 ug/ml c) 0.76 +or- 0.08 ug/ml d) 0.51 +or- 0.08 ug/ml	a) Start of hemodialysis, 1 hr after dose b) After 4 hr hemodialysis, 5 hr after dose c) Sulfoxide metabolite, at start of hemodialysis, 1 hr after dose d) After 4 hr hemodialysis, 5 hr after dose Dose = 200 mg 36-68 yr olds, renal failure, receiving hemodialysis METABOLITES; BLOOD PLASMA; DRUGS; HEMODIALYSIS; SWEDEN; ADULTS; KIDNEY DISEASES	Larsson, R. Erlanson, P. Bodemar, G. Norlander, B. Fransson, L. Strouth, L. 1982 European Journal of Clinical Pharmacology 21:325-330
0402 Blood, plasma	Injection Ingestion	HPLC	34	a) 0.10-0.31 ug/ml b) 0.56-2.06 ug/ml c) 0.07-0.21 ug/ml d) 0.26-0.80 ug/ml e) 0.55-1.83 ug/ml f) 0.31-0.68 ug/ml	a) 0.18 +or- 0.03 ug/ml b) 0.95 +or- 0.15 ug/ml c) 0.12 +or- 0.02 ug/ml d) 0.38 +or- 0.05 ug/ml e) 0.82 +or- 0.25 ug/ml f) 0.45 +or- 0.06 ug/ml S.E.	a) Maximum sulfoxide metabolite 15 min after 200 mg, IV. Undetected 4.5 hr, 9 cases with normal renal function b) Maximum sulfoxide metabolite 9 hr after 200 mg, IV. At 24 hr, 0.59 +or- 0.09 ug/ml, 10 cases with severe renal failure c) Sulfoxide metabolite, steady state levels before morning dose, 200 mg 3X/day plus 400 mg at bedtime, oral, 10 cases with normal renal function d) Cimetidine level in c) e) Sulfoxide metabolite, steady state levels before morning dose, 200 mg 2X/day, oral, 5 cases with severe renal failure f) Cimetidine level in e) 26-70 yr olds with peptic ulcers or on hemodialysis URINE; ANTIHISTAMINES; DRUG THERAPY; DRUGS; GASTROINTESTINAL DISEASES; KIDNEY DISEASES; BLOOD PLASMA	Larsson, R. Erlanson, P. Bodemar, G. Wulan, A. Bertler, A. Fransson, L. Norlander, B. 1982 British Journal of Clinical Pharmacology 13:163-170

(NEXT PAGE)

Guanidine, N-cyano-N'-methyl-N''-(2-(((5-methyl-1H-imidazol-4-yl)methyl)thio)ethyl)-
51481-61-9
C10-H16-N6-S
MW 252.34

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0403 Blood, plasma	Injection Ingestion	HPLC	2	a) 7.5-0.48 ug/ml b) 0.9-0.02 ug/ml c) 2.5-0.5 ug/ml d) 0.7-0.05 ug/ml	a) Not given b) Not given c) Not given d) Not given	a) 0 and 10 hr after 206 mg IV, worst fit to biexponential equation b) 0 and 8 hr after 200 mg IV, best fit to biexponential equation c) 4 and 10 hr after 200 mg oral. 2 ug/ml at 30 min d) 0.25 and 8 hr after 200 mg oral. 0.3 ug/ml at 2 hr Estimated from graph Hospitalised chronic liver cirrhosis patients, mean age 50 yr, mean wt 65 kg GERMANY; ADULTS; CIRRHOSIS; BLOOD PLASMA; URINE; DRUGS; COMPARATIVE EVALUATIONS	Ziegler, H. Muller-Liebenau, H. Domagyi, A. 1982 British Journal of Clinical Pharmacology 14:621-629
0404 Blood, serum	Injection Ingestion	HPLC	35	a) 0.10-10.2 ug/ml b) 0.12-4.0 ug/ml	a) Not given b) Not given	a) 4.5 and 1.0 hr after 300 mg, first sampling b) 6.2 and 2.5 hr after 300 mg, second sampling 20-86 yr old patients on therapeutic dosage Clearance decreased with age. Dementia, possibly from drug, in 71 yr old man. COMPARATIVE EVALUATIONS; ADULTS; CENTRAL NERVOUS SYSTEM DISEASES; BLOOD SERUM; ANTIHISTAMINES; DRUG THERAPY; DRUGS	Dreyer, D.H. Romankiewicz, J. Lorenzo, B. Reidenberg, M.M. 1982 Clinical Pharmacology and Therapeutics 31(1):85-90
0405 Urine	Ingestion	Radiometry TLC CC HPLC MS	5	a) Not applicable b) Not applicable c) Not applicable d) 75.5-85.9% of dose e) Not applicable	a) 93.1% of dose b) 84.3% of dose c) 86.5% of dose d) Not given e) 75.8% of dose	a) 0.5 mg (9.6 uCi), 1 case b) 5 mg (11.2 uCi), 1 case c) 50 mg (22.6 uCi), 1 case d) 500 mg (10 uCi), 5 cases e) 1500 mg (50 uCi), 1 case % of dose eliminated within 72 hr after (2-C-14)cimetidine. Unchanged cimetidine (62.6%), cimetidine-N'-glucuronide (24%), cimetidine sulphoxide (7.4%), metabolites in 24 hr excretion Healthy volunteers URINE; DRUGS; METABOLISM; METABOLITES	Mitchell, S.C. Idle, J.R. Smith, R.L. 1982 Xenobiotica 12(5):283-293

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Guanidine, N-cyano-N'-methyl-N''-(2-(((5-methyl-1H-imidazol-4-yl)methyl)thio)ethyl)-
51481-61-9
C10-H16-N6-S
MW 252.38

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8406 Urine	Injection	HPLC	19	a) 42.0-144.1 mg b) 8.7-51.2 mg c) 1.1-11.7 mg d) 0-3.2 mg	a) 94.5 +or- 10.0 mg b) 25.5 +or- 5.0 mg c) 4.4 +or- 0.4 mg d) 0.9 +or- 0.5 mg S.E.	a) 21.4-72.1% (mean 47.3%) of dose recovered as cimetidine, 9 cases with normal renal function b) 4.4-25.6% (mean 12.8%) of dose recovered as sulfoxide metabolite c) 0.6-5.9% (mean 2.2%) of dose recovered as cimetidine, 10 cases with severe renal failure d) 0.3-1.6% (mean 0.5%) of dose recovered as sulfoxide metabolite 24 hr after 200 mg, IV 27-66 yr olds (mean 52 yr) with peptic ulcers. 44-70 yr olds (mean 59 yr) on hemodialysis. URINE; ANTIHISTAMINES; DRUG THERAPY; DRUGS; GASTROINTESTINAL DISEASES; KIDNEY DISEASES; BLOOD PLASMA	Larsson, R. Erlanson, P. Bodemar, G. Walan, A. Bertler, A. Franzson, L. Norlander, B. 1982 British Journal of Clinical Pharmacology 13:163-170
8407 Urine	Injection Ingestion	HPLC	26	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 75.7 +or- 11.0% b) 57.2 +or- 11.9% c) 57.3 +or- 13.4% d) 42.1 +or- 14.7% e) 10.3 +or- 2.5% f) 13.2 +or- 3.5% % of dose	a) Unchanged drug, patients, IV b) Unchanged drug, controls, IV c) Unchanged drug, patients, oral d) Unchanged drug, controls, oral e) Sulfoxide metabolite, patients f) Sulfoxide metabolite, controls Doses of 200 mg. 14 hospitalized liver cirrhosis patients, mean age 50 yr, mean wt 65 kg and 12 controls, mean age 49 yr, mean wt 70 kg GERMANY; ADULTS; CIRRHOSIS; BLOOD PLASMA; URINE; DRUGS; COMPARATIVE EVALUATIONS	Gugler, R. Muller-Liebenau, B. Somogyi, A. 1982 British Journal of Clinical Pharmacology 14:421-429

Hydantoin, 5,5-diphenyl- (8 CI)
2,4-Imidazolidinedione, 5,5-diphenyl- (9 CI)
57-41-0
C15-H12-N2-O2
MW 252.36, MP 295-298 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8400 Blood, plasma	Ingestion	GC	38	a) 5-125 umol/l b) 0.5-10 umol/l	a) Not given b) Not given	a) Total phenytoin b) Unbound phenytoin Random times after 100-450 mg. Unbound phenytoin correlated with saliva levels. Patients on phenytoin or phentoin plus Na valproate. Estimated from graph. Epileptic patients (5-70 yr old) BLOOD PLASMA; SALIVA; ANTICONVULSANTS; DRUG INTERACTION; DRUGS; MEASUREMENT METHODS	Knott, C. Hanshaw-Thomas, A. Reynolds, F. 1982 British Medical Journal 284:13-16
8409 Blood, plasma	Ingestion	HPLC	10	a) 3.4-30.5 mg/l b) 5.1-28.4 mg/l c) 3.6-31.8 mg/l	a) 11.82 mg/l b) 14.01 mg/l c) 13.28 mg/l	a) Slow release capsule b) Rapid release capsule c) Oral solution Peak steady-state level after 100 mg/8 hr (300 mg/day) for 2 wk. b),c) significantly different from a) 18-54 yr old (mean 34.6 yr) epileptics, mean wt 67.4 +or- 11.8 kg, MW No symptoms in 8 cases. Drowsiness, nystagmus, ataxia, nausea, dizziness, fatigue, and seizures reported by some. MINNESOTA; CENTRAL NERVOUS SYSTEM DISEASES; BLOOD PLASMA; DRUG THERAPY; DRUGS; COMPARATIVE EVALUATIONS; ANTICONVULSANTS	Sawchuk, R.J. Pepin, S.M. Leppik, I.E. Gummit, R.J. 1982 Journal of Pharmacokinetics and Biopharmaceutics 10(4):365-383
8410 Blood, serum						Review. Usefulness of serum levels of cardiac drugs in clinical practice. BLOOD SERUM; ANESTHETICS; ANTIARRHYTHMIC AGENTS; ANTIHYPERTENSIVE AGENTS; DIURETICS; DRUGS; STIMULANTS; REVIEW	Pennock, R.S. 1978 American Family Physician 17(4):194-196

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Hydantoin, 5,5-diphenyl- (8 CI)
2,4-Imidazolidinedione, 5,5-diphenyl- (9 CI)
57-41-0
C15-H12-N2-O2
MW 252.26, MP 295-296 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8411 Saliva	Ingestion	GC	38	0.5-15 umol/l	Not given	Random times after 100-450 mg. Correlation with plasma levels of unbound drug. Patients on phenytoin or phenytoin plus Na valproate. Estimated from graph. Epileptic patients (5-70 yr old) BLOOD PLASMA; SALIVA; ANTICONVULSANTS; DRUG INTERACTION; DRUGS; MEASUREMENT METHODS	Knott, C. Hanshaw-Thomas, A. Reynolds, F. 1983 British Medical Journal 286:13-16

Imidazole-1-ethanol, 2-methyl-5-nitro- (8 CI)
1H-Imidazole-1-ethanol, 2-methyl-5-nitro- (9 CI)
443-48-1
C6-H9-N3-O3
MW 171.16, MP 150-160 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8412 Blood, plasma	Injection	HPLC	11	a) 7.5-8.5 ug/ml b) 29.0-23.0 ug/ml c) 17.0-7.0 ug/ml d) 20.0-5.9 ug/ml	a) Not given b) Not given c) Not given d) Not given	a) 0.5 and 48 hr after 7.5 mg/kg, 2 patients, gestational ages <32 wk b) 0.5 and 48 hr after 15 mg/kg, 1 patient, gestational age <32 wk c) 0.5 and 48 hr after 15 mg/kg, 5 patients, gestational ages 32-36 wk d) 0.5 and 48 hr after 15 mg/kg, 3 patients, gestational ages >36 wk Estimated from graph Neonates with anaerobic intrauterine infection or necrotizing enterocolitis, Australia AUSTRALIA; NEWBORN; INFECTION; BLOOD PLASMA; ANTIBIOTICS; COMPARATIVE EVALUATIONS	Jager-Roman, E. Baird-Lambert, J. 1982 Journal of Pediatrics 100(4):651-654

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Imidazole-1-ethanol, 2-methyl-5-nitro- (8 CI)
1H-Imidazole-1-ethanol, 2-methyl-5-nitro- (9 CI)
443-48-1
CS-HB-HI-03
MF 171.16, MP 158-160 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8413 Blood, plasma	Injection	HPLC	4	a) 10-1 mg/l b) 25-1 mg/l c) 72-4 mg/l d) 42-4 mg/l e) 1-10 mg/l	a) Not given b) Not given c) Not given d) Not given e) Not given	a) Initially and 10 hr after 0.5 g b) Initially and 24 hr after 1.0 g c) Initially and 24 hr after 2.0 g d) Initially and 24 hr after 1.5 g e) Ethoxy metabolite, initially and 8 hr after 1.5 g Estimated from graph. IV formulation absorbed faster than oral Patients with malignant brain tumors ADULTS; CARCINOMAS; NEOPLASMS; BLOOD PLASMA; DRUG INTERACTION; DRUG THERAPY; DRUGS	Urtasun, R.C. Robin, H.R. Partington, J. 1983 Surgery 93(1):145-148
8414 Brain tumor	Injection	HPLC	1	a) 4-10 mg/l b) 0-2 mg/l	a) Not given b) Not given	a) 0.5 and 4 hr after 1.5 g. Plasma level 42-20 mg/l b) Ethoxy metabolite 0.5 and 4 hr after 1.5 g. Plasma levels 0-5 mg/l IV. Estimated from graph Patients with malignant brain tumors ADULTS; CARCINOMAS; NEOPLASMS; BLOOD PLASMA; DRUG INTERACTION; DRUG THERAPY; DRUGS	Urtasun, R.C. Robin, H.R. Partington, J. 1983 Surgery 93(1):145-148

Indole-3-acetic acid, 1-(p-chlorobenzoyl)-5-methoxy-2-methyl- (8 CI)
1H-Indole-3-acetic acid, 1-(4-chlorobenzoyl)-5-methoxy-2-methyl- (9 CI)
53-06-1
C19-H16-Cl-N-O4
MW 357.81, MP different forms 155 C, 162 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8415 Blood, plasma	Ingestion	HPLC	12	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.651 ug/ml b) 0.487 ug/ml c) 0.367 ug/ml d) 0.691 ug/ml e) 0.396 ug/ml f) 0.403 ug/ml	a) GITS, controlled release of 75 mg at 0 and 12 hr, day 2 b) 25 mg capsule at 0, 4, and 8 hr and 325 mg capsules at 12 hr, day 2 c) 50 mg capsule at 0, 4, and 14 hr, day 2 d) GITS, day 5 e) 25 mg capsule, day 5 f) 50 mg capsule, day 5 Trough levels GITS (Gastrointestinal Therapeutic Systems): osmotically driven, controlled-release tablets. Levels more uniform after controlled-release form than capsules. Healthy subjects ADULTS; RHEUMATOID ARTHRITIS; BLOOD PLASMA; ANTI-INFLAMMATORY AGENTS; COMPARATIVE EVALUATIONS; DRUGS	Bayne, W. Place, V. Theeuwes, F. Rogers, J.D. Lee, R.B. Davies, R.O. Kwan, K.C. 1982 Clinical Pharmacology and Therapeutics 32(2):270-276
8416 Blood, serum	Ingestion	HPLC	10	a) Not given b) Not given c) Not given d) Not given	a) 0.45 +or- 0.04 ug/ml b) 0.79 +or- 0.08 ug/ml c) 0.33 +or- 0.03 ug/ml d) 0.77 +or- 0.08 ug/ml	a) Trough, before AM dose, slow-release tablet b) Steady-state, 6 hr after slow-release tablets c) Trough, before AM dose, conventional capsule d) Steady-state, 3 hr after conventional capsule Dose: slow-release tablet 50 mg 2x/day. Conventional capsule 25 mg 2x/day and 50 mg in the PM Rheumatoid arthritis patients. Finland. Median age 47 yr. Median disease duration 12 yr. Slow-release tablet absorbed more slowly, produced more even serum levels, less frequent adverse side-effects. FINLAND; ADULTS; RHEUMATOID ARTHRITIS; BLOOD SERUM; ANALGESICS; ANTI-INFLAMMATORY AGENTS; COMPARATIVE EVALUATIONS	Kaarela, K. Lehtinen, K. Makisara, P. Helttinen, K. Lamminsiva, U. Gordin, A. 1982 European Journal of Clinical Pharmacology 23:349-351

Insulin
9004-10-8
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0417 Blood	Injection Ingestion	RIA	263	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 9.8 +or- 2.7 uU/ml b) 11.13 +or- 0.96 uU/ml c) 5.05 +or- 0.87 uU/ml d) 7.3 +or- 0.97 uU/ml e) 4.3 +or- 0.65 uU/ml f) 4.04 +or- 0.99 uU/ml g) 8.0 +or- 1.5 uU/ml h) 10.5 +or- 3.4 uU/ml	a) 20 nondiabetics. Hemoglobin A(sub1)C (HbA1C) 3.5-6.5%. Total insulin (TI) 9.5 +or- 2.8 uU/ml b) 35 diabetics. HbA1C <8.0%. TI 260.2 +or- 87.8 uU/ml c) 141 diabetics. HbA1C >8.0%. TI 262.5 +or- 98.6 uU/ml d) 106 diabetics. Fasting glucose <200 mg/dl. TI 304.3 +or- 40.2 uU/ml e) 137 diabetics. Fasting glucose >200 mg/dl. TI 219.9 +or- 53.9 uU/ml f) 6 diabetics. 24 hr after 0.4-0.49 U/kg insulin. TI 220.7 +or- 102.9 uU/ml g) 20 diabetics. 24 hr after 0.7-0.79 U/kg insulin. TI 299.6 +or- 61.6 uU/ml h) 4 diabetics. 24 hr after 1.0-1.5 U/kg insulin. TI 467.7 +or- 229.5 uU/ml Free insulin Levels correlated with glucose and Hb A(sub 1)C. Insulin not correlated with dose. Insulin-dependent diabetic children and non diabetic children CHILDREN; DIABETES; BLOOD; DRUG THERAPY; DRUGS; HORMONES; HEMOGLOBINS	Holmes, J.I. Root, A.W. 1981 Journal of Pediatrics 99(6):862-867

Iodine
7553-56-2
I
AtW 126.9045, MP 113.60 C, BP 185.24 C, VP (solid) 0.03 mm Hg at 0 C, 0.305 mm Hg at 25 C, 2.154 mm Hg at 50 C, 26.78 mm Hg at 90 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0410 Blood, serum	Vaginal		12	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given m) Not given	a) 6.8 ug/dl b) 9.8 ug/dl c) 10.4 ug/dl d) 10.7 ug/dl e) 8.2 ug/dl f) 9.1 ug/dl g) 11.0 ug/dl h) 10.0 ug/dl i) 8.8 ug/dl j) 10.6 ug/dl k) 11.7 ug/dl l) 10.7 ug/dl m) 7.0 ug/dl	a) Before 1st douche, day 1 b) 15 min after a) c) 60 min after a) d) 360 min after a) e) Before 7th douche, day 7 f) 15 min after e) g) 60 min after e) h) 360 min after e) i) Before 14th douche, day 14 j) 15 min after i) k) 60 min after i) l) 360 min after i) m) 7 days after i) Douche 1 oz Betadine (10% polyvinylpyrrolidone-iodine, 1% iodine) in 1 liter warm water for 14 days. Final solution had 300 mg available iodine. e) and i) greater than a) and m) ($p<0.01$). c) and d) greater than a) ($p<0.01$). g) and h) greater than e) ($p<0.01$). k) and l) greater than i) ($p<0.01$) Iodine:creatinine ratio in urine collected before douching higher on days 7 and 14 than controls on days 1 and 21 ($p<0.01$) No increase in serum protein-bound iodine during 14 days Nonpregnant euthyroid volunteers, 22-36 yr old, NA Small, significant rise in serum thyrotropin CHEMICIDES; MASSACHUSETTS; ADULTS; BLOOD SERUM; THYROID GLANDS; DRUGS; ORAL CONTRACEPTIVES; IODINE; RADIOISOTOPES; RADIONUCLIDES	Safran, M. Braverman, L.E. 1982 Obstetrics and Gynecology 60(1):35-40

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Iodine
7553-56-2
I
AtW 126.9045, MP 113.60 C, BP 185.24 C, VP (solid) 0.03 mm Hg at 0 C, 0.305 mm Hg at 25 C, 2.154 mm Hg at 50 C, 26.70 mm Hg at 90 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0619 Thyroid gland	Vaginal		12	a) Not given b) Not given	a) 22 +or- 2.3% b) 8.5 +or- 1.5%	a) Before douching b) After douche with 1 oz Betadine (10% polyvinylpyrrolidone-iodine, 1% iodine) in 1 liter warm water for 14 days. Final solution had 300 mg available iodine % of I-123 dose 24-hr uptake Significant difference ($p<0.005$) Nonpregnant euthyroid volunteers, 23-36 yr old, MA Small, significant rise in serum thyrotropin GERMICIDES; MASSACHUSETTS; ADULTS; BLOOD REMOVAL; THYROID GLANDS; DRUGS; ORAL CONTRACEPTIVES; IODINE; RADIOISOTOPES; RADIONUCLIDES	Safran, M. Braverman, L.E. 1982 Obstetrics and Gynecology 60(1):35-40

Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2060 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0620 Blood	Ingestion		50	a) 1.05-17.06% of dose b) 1.96-10.45% of dose c) 0.56-15.25% of dose d) 0.37-6.35% of dose e) 0.97-26.57% of dose f) 0.50-15.77% of dose	a) 6.38% of dose b) 4.92% of dose c) 3.21% of dose d) 1.02% of dose e) 2.87% of dose f) 1.69% of dose Geometric means	a) Time-release capsule, fasting subjects b) Elixir, fasting subjects c) Time-release capsule plus meal with 4.7 mg and foods known to be inhibitors d) Elixir plus meal with 4.7 mg and foods known to be inhibitors e) Time-release capsule plus meal with 5.7 mg f) Elixir plus meal with 5.7 mg Absorption, 14 days after 50 mg as sulfate on alternate days for 10 days. Doses labelled with Fe-55 and Fe-59 Healthy 20-55 yr olds ABSORPTION; COMPARATIVE EVALUATIONS; IRON; ADULTS; BLOOD; FOODS; DRUGS	Cook, J.D. Lipschitz, D.A. Shikne, B.S. 1982 Journal of Clinical Pharmacology and Therapeutics 22(4):531-539

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Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8421 Blood, serum	Ingestion	AAS	5	a) Not given b) Not given	a) 111 +or- 31 ug/dl b) 160 +or- 29 ug/dl S.E.	a) Prestudy b) After 10 mg/day for 83 days No significant difference Healthy 65-74 yr olds ADULTS; AGE; BLOOD SERUM; FECES; IRON; MEVALS; ZINC; DIETS	Turnlund, J.R. Michel, M.C. Keyes, W.R. King, J.C. Margen, S. 1983 American Journal of Clinical Nutrition 35:1033-1040
8422 Blood, serum			51	a) Not given b) Not given c) Not given	a) <50 ug/dl b) 50-75 ug/dl c) >75 ug/dl	a) 43.1% before fortification, 25.5% after fortification (significantly different (p<0.05 or better)) b) Before 27.5%, after 39.2% c) Before 29.4%, after 35.3% % children at respective level before and 2 yr after fortification of sugar resulting in 3-fold increase in mean daily intake vitamin A No change in Fe intake during study period (53% families below recommended level) Vitamin A fortification favorably affected Fe metabolism and nutritional status Preschool children, 1-5 yr old, 12 small rural communities, October-November 1975 and 1977, Guatemala GUATEMALA; CHILDREN; NUTRITIONAL DEFICIENCIES; BLOOD SERUM; IRON; MEVALS; VITAMIN A; DIETS; FOOD ADDITIVES; METABOLISM; METABOLITES; RURAL AREAS	Mejia, L.A. Arroyave, G. 1982 American Journal of Clinical Nutrition 36:87-93

Isonipecotic acid, 1-methyl-4-phenyl-, ethyl ester (8 CI)
4-Piperidinecarboxylic acid, 1-methyl-4-phenyl-, ethyl ester (9 CI)
57-42-1
C15-H21-N-O2
MW 247.35, MP 186-189 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8423 Blood	Injection Ingestion	GC	1	a) 180-9 ng/ml b) 4.3-23 ng/ml c) 170-15 ng/ml d) 10-30 ng/ml	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) Meperidine. Initial measurement and 24 hr after 50 mg IV b) Normeperidine. Initial measurement and 12 hr. 30 ng/ml at 24 hr c) Meperidine. 2 and 24 hr after 100 mg oral. Initial measurement 120 ng/ml d) Normeperidine. Initial measurement and 12 hr. 25 ng/ml at 2.4 hr Estimated from graph. Healthy 30 yr old, wt 72 kg BLOOD; ANALGESICS; DRUGS; MEASUREMENT METHODS; METABOLITES	Jacob, P., III Rigod, J.F. Pond, S.M. Benowitz, N.L. 1982 Journal of Pharmaceutical Sciences 71(2):166-168
8424 Urine	Injection	GC	6	a) 0.2-10.3% b) 0.1-3.1% c) 0.1-3.4%	a) 2.4 +or- 2.0% b) 1.4 +or- 0.6% c) 1.2 +or- 0.6% S.E.	a) Day 1 b) Day 2 c) Day 3 % of dose excreted in 24 hr Daily dose, 50 mg by rapid injection after overnight fast. Alkaline urine maintained by NaHCO3 before and during study. 20-32 yr olds, wt 59-90 kg ADULTS; ANALGESICS; DRUGS; NARCOTICS; URINE	Dunkerley, R. Johnson, R. Scheuker, E. Wilkinson, G.R. 1976 Clinical Pharmacology and Therapeutics 20(5):546-551

Isoquinoline, 6,7-dimethoxy-1-veratryl- (8 CI)
Isoquinoline, 1-((3,4-dimethoxyphenyl)methyl)-6,7-dimethoxy- (9 CI)
58-74-2
C20-H21-N-O4
MW 339.38, MP 147 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8425 Blood	Ingestion	HPLC	9	SC3-<10 ng/ml	Not given	Unchanged drug 2 and 48 hr after 200 mg, as HCl. Initial measurement 410 ng/ml at 1 hr. Range of means, estimated from graph. > 60 yr olds with normal gastrointestinal, liver, kidney functions BLOOD; URINE; DRUGS; ADULTS; METABOLISM; METABOLITES; RADIOISOTOPES; DRUGS	Wilen, C. Ylitalo, P. 1982 Journal of Pharmacy and Pharmacology 34:264-266
8426 Urine	Ingestion	GC TLC Radiometry	7	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 0.6 +or- 0.1% b) 16.3 +or- 0.6% c) 1.8 +or- 1.1% d) 0.9 +or- 0.1% e) 23.3 +or- 0.5% f) 9.2 +or- 1.2% g) 0.19 +or- 0.1% S.E.	a) Papaverine b) Metabolite I, 6'-demethylpapaverine c) Metabolite II, 3'demethylpapaverine d) Metabolite III e) Metabolite IV f) Metabolite V g) Metabolite VI % of extractable radioactivity in 0-48 hr pooled urine samples after 200 mg dose > 60 yr olds with normal gastrointestinal, liver, kidney functions BLOOD; URINE; DRUGS; ADULTS; METABOLISM; METABOLITES; RADIOISOTOPES; DRUGS	Wilen, C. Ylitalo, P. 1982 Journal of Pharmacy and Pharmacology 34:264-266

L-Cysteine, S-(carboxymethyl)-
638-23-3
C5-H9-N-O4-S
MW 179.21, MP 204-207 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8427 Urine	Ingestion	GC	2	a) 84.9-86.6% of dose b) 90.5-98.2% of dose c) 6.7-12% of dose d) 2.0-5.1% of dose e) 0.5-5.0% of dose	a) 85.8% of dose b) 94.4% of dose c) 8.6% of dose d) 3.6% of dose e) 3.1% of dose	Radioactivity at 0 and 72 hr after C14-labelled compound b) Radioactivity at 0 and 72 hr after S35-labelled compound c) Peak, 2-2.5 hr after S35-labelled compound d) Sulfoxide (carboxymethyl) metabolite, peak 2-3.5 hr after S35-labelled compound e) Sulfoxide (methyl) metabolite, peak 5-7 hr after S35-labelled compound Dose: 750 mg. c)-e) estimated from graph. Data given for other metabolites. Healthy volunteers URINE; HUMAN; UNITED KINGDOM; ADULTS; METABOLISM; METABOLITES	Waring, R.H. Mitchell, S.C. 1982 Drug Metabolism and Disposition 10(1):61-63

L-Proline, 1-(3-mercapto-2-methyl-1-oxopropyl)-, (S)-
62571-86-2
C9-H15-N-O3-S
MW 217.31

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8428 Blood	Ingestion	TLC Radiometry	12	a) 820-10 ng/ml b) 325-0 ng/ml	a) Not given b) Not given	a) 0.75 and 6 hr after fasting and 100 mg dose. Initial measurement 425 ng/ml at 0.3 hr b) 1 and 6 hr after standard breakfast and 100 mg dose. Initial measurement 150 ng/ml at 0.3 hr levels significantly higher for fasted subjects up to 1.5 hr. Not significantly different after 1.5 hr Range of means estimated from graph Normal 19-32 yr old Caucasians, wt 60-106 kg, ht 167-200 cm BIOAVAILABILITY; BLOOD; ANTIHYPERTENSIVE AGENTS; COMPARATIVE EVALUATIONS; ADULTS; HYPERTENSION; RADIOISOTOPES; HUMAN	Singhvi, S.M. McKinstry, D.N. Shaw, J.M. Willard, D.A. Migdalof, B.H. 1982 Journal of Clinical Pharmacology 22:135-140

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L-Proline, 1-(3-mercapto-2-methyl-1-oxopropyl)-, (S)-
62571-86-2
C9-H15-N-O3-S
MW 217.31

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0429 Blood	Ingestion	GC/MS	12	a) Not given b) Not given c) Not given d) Not given	a) 122 +or- 16 ng/ml b) 142 +or- 13 ng/ml c) 589 +or- 68 ng/ml d) 844 +or- 134 ng/ml	a) Free drug at 1.43 +or- 0.19 hr, day 1 b) Free drug at 0.92 +or- 0.89 hr, day 5 c) Total drug at 1.72 +or- 0.22 hr, day 1 d) Total drug at 1.17 +or- 0.11 hr, day 5 Dose regimen: 25 mg on days 1 and 5. 25 mg IH/day on days 2-4 Peaks 63-73 yr old patients with severe chronic congestive heart failure on digoxin and diuretic therapy until 5 days before study. ADULTS; HEART DISEASES; BLOOD; URINE; ANTIHYPERTENSIVE AGENTS; COMPARATIVE EVALUATIONS; HUMAN	Cody, R.J. Schaer, G.L. Covit, A.B. Pondolfino, K. Williams, G. 1982 Clinical Pharmacology and Therapeutics 32(6):721-726
0430 Urine		TLC Radiometry	12	a) Not given b) Not given c) Not given d) Not given	a) 74.3 +or- 1.72% b) 30.0 +or- 1.90% c) 67.7 +or- 1.42% d) 25.3 +or- 1.09% S.E.	a) Total radioactivity, subjects fasted 8 hr prior and 4 hr after dose b) Unchanged captopril, subjects fasted 8 hr prior and 4 hr after dose c) Total radioactivity, subjects fed before dose d) Unchanged captopril, subjects fed before dose % of 100 mg C14-labelled tablet excreted within 24 hr. Significant difference between fasted and fed subjects (p<0.001) Normal 18-33 yr old Caucasians, wt 60-100 kg, ht 167-200 cm BIOAVAILABILITY; BLOOD; ANTIHYPERTENSIVE AGENTS; COMPARATIVE EVALUATIONS; ADULTS; HYPERTENSION; RADIOISOTOPES; HUMAN	Singhvi, S.M. McKinstry, D.N. Shaw, J.M. Willard, D.A. Highlef, D.N. 1982 Journal of Clinical Pharmacology 22:135-140

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L-Proline, 1-(3-mercapto-2-methyl-1-oxopropyl)-, (S)-
62571-86-2
CS-819-S-03-S
MW 217.31

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0431 Urine	Ingestion	HPLC Electrochem	12	a) Not given b) Not given	a) 7.6 +or- 1.9% of dose b) 13.6 +or- 2.3% of dose	a) Day 1 b) Day 5 Free drug, 0-12 hr cumulative excretion after dose. Dose regimen: 25 mg on days 1 and 5, 25 mg BE/day on days 2-4 63-73 yr old patients with severe chronic congestive heart failure. Digoxin and diuretic therapy until 5 days before study. ADULTS; HEART DISEASE; BLOOD; URINE; ANTIHYPERTENSIVE AGENTS; COMPARATIVE EVALUATIONS; HUMAN	Cody, R.J. Schaer, G.L. Covit, A.B. Pondolfino, K. Williams, G. 1982 Clinical Pharmacology and Therapeutics 32(6):721-726

Lithium
7439-93-2
Li
AEW 6.941, MP 180.50 C, BP 1336 C, VP 1 mm Hg at 723 C, 10 mm Hg at 890 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0432 Blood, serum	Ingestion		2	a) 0.6-1.0 mmol/l b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) Not given b) 0.3 mmol/l c) 1.0 mmol/l d) 0.9 mmol/l e) 0.8 mmol/l	a) Case 1, 12 hr after 250 mg 2X/day b) 29 hr after dose, also received 10 doses trazylcypromine, 10 mg 3X/day c) 12 hr after dose for 3 wk d) Case 2, Dec 10, 1977 after 2 yr regulated treatment (serum level maintained 0.6-1.0 mmol/l) e) Jan 20, 1978 after emergency hospitalization. Dose Li carbonate 250 mg. (Also received amitriptyline 25 mg 3X/day) 62 yr old school teacher with agitated depression and 55 yr old with bipolar affective disorder Ataxic and dysarthric, confused, disoriented in time, impaired short-term memory and attention span, nominal dysphasia, acalculia, hyperreflexia, fine resting tremor, and difficulty with tests of visuospatial construction and copying. Symptoms improved when Li was discontinued. CASE HISTORIES; BLOOD SERUM; ANTIDEPRESSIVE AGENTS; DRUG THERAPY; DRUGS; LITHIUM	Ray, O. Simpson, H. 1982 Lancet 2(8290):160-161

Methanesulfonanilide, 4'-(1-hydroxy-2-(isopropylamino)ethyl)- (8 CI)
Methanesulfonamide, N-(4-(1-hydroxy-2-((1-methylethyl)amino)ethyl)phenyl)- (9 CI)
3930-20-9
C12-H20-N2-O3-S
MW 272.36

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0433 Blood, plasma	Injection	HPLC Fluorimetry	6	2.75-0.11 ug/ml	Not given	0.00 and 23.75 hr after 1.2 mg/kg Healthy 22-25 yr olds, wt 50-65 kg DRUGS; BLOOD PLASMA; URINE; DRUGS; MEASUREMENT METHODS	Poirier, J.M. Aubry, J.P. Choquet, G. Jaillon, P. 1981 Therapie 36(6):865-871

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Methanesulfonanilide, 4'-(1-hydroxy-2-(isopropylamino)ethyl)- (8 CI)
Methanesulfonamide, N-(4-(1-hydroxy-2-((1-methylethyl)amino)ethyl)phenyl)- (9 CI)
3030-20-9
C12-H20-N2-O3-S
MW 272.36

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8434 Urine	Injection	HPLC Fluorimetry	5	75.68-93.45% of dose	86.62 +or- 3.00% of dose	72 hr cumulative excretion after 1.2 mg/kg Healthy 22-25 yr olds, wt 50-65 kg FRANCE; BLOOD PLASMA; URINE; DRUGS; MEASUREMENT METHODS	Poirier, J.M. Aubry, J.P. Chaynel, G. Jaillon, P. 1981 Therapie 36(4):465-471

Morphinan-3,6alpha-diol, 7,8-didehydro-4,5alpha-epoxy-17-methyl- (8 CI)
Morphinan-3,6-diol, 7,8-didehydro-4,5-epoxy-17-methyl- (5alpha,6alpha)- (9 CI)
57-27-2
C17-H19-N-O3
MW 285.33, MP 197 C (metastable phase), 254 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8435 Blood, plasma	Injection Ingestion Rectal Sublingual	RIA	a) 8 b) 8 c) 5 d) 8	a) 140-73 ng/ml b) 75-25 ng/ml c) 110-30 ng/ml d) 140-25 ng/ml	a) Not given b) Not given c) Not given d) Not given	a) 3 and 4 hr after sublingual dose. 75 ng/ml at 15 min b) 3 and 4 hr after rectal dose. 60 ng/ml at 15 min. c) 3 and 4 hr after oral dose. 66 nm/ml at 15 min d) 15 min and 4 hr after IM dose. 50 ng/ml at 3 hr Dose, 10 mg as hydrochloride. Range of means, some data estimated from graph. Significant difference between a) and b), c), d), at 4 hr (p <0.05). Cancer patients with chronic pain Constipation, drowsiness, dry mouth, vomiting, psychotic manifestations, local intolerance. Pain remission: sublingual > rectal > oral > IM CARCINOMAS; SARCOMAS; ANALGESICS; DRUG THERAPY; DRUGS; NARCOTICS; SEDATIVES; COMPARATIVE EVALUATIONS	Panzuti, F. Rossi, A.P. Infelice, G. Marraro, D. Camera, P. Cricca, A. Strocchi, E. Burroni, P. Lapucci, L. Frust, F. Vecchi, F. Zanichelli, L. Pieromaldi, S. Bolelli, G.F. Farneti, M.G. Danieli, A. 1982 Pharmacological Research Communications 14(4):369-380

Morphinan-6alpha-ol, 7,8-didehydro-4,5alpha-epoxy-3-methoxy-17-methyl- (8 CI)
Morphinan-6-ol, 7,8-didehydro-4,5-epoxy-3-methoxy-17-methyl-, (5alpha,6alpha)- (9 CI)
76-57-3
C18-H21-N-O3
MW 299.36, MP 154-156 C (after drying at 80 C)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0436 Blood, plasma	Injection Ingestion	RIA	22	a) Not given b) Not given c) Not given d) Not given	a) 93 +or- 5 ng/ml b) 105 +or- 35 ng/ml c) 262 +or- 18 ng/ml d) 229 +or- 35 ng/ml S.E.	a) Oral, 12 nonsmokers b) Oral, 10 smokers c) IM, 12 nonsmokers d) IM, 10 smokers Peaks after 60 mg. No significant differences. Nonsmokers, mean age 26.0 +or- 2.6 yr, wt 77.0 +or- 6.6 kg and smokers, mean age 28.0 +or- 2.1 yr, wt 72.6 +or- 7.7 kg BLOOD PLASMA; ANALGESICS; DRUGS; SEDATIVES; METABOLISM; SMOKING	Rogers, J.F. Findley, J.W.A. Hull, J.H. Buts, R.F. Jones, E.C. Bostrack, J.A. Welch, R.M. 1982 Clinical Pharmacology and Therapeutics 32(2):218-227
0437 Blood, plasma	Ingestion	RIA	1	a) 170.5-16 ng/ml b) 16-7 ng/ml	a) Not given b) Not given	a) 1 and 12 hr after 60 mg as phosphate b) Morphine (metabolite), 1 and 12 hr after 60 mg codiene as phosphate Estimated from graph 32 yr old mother, week 7 of lactation MILK; COMPARATIVE EVALUATIONS; CAFFEINE; ADULTS; BLOOD PLASMA; LACTATION; ANALGESICS; ANTIPYRETICS; SEDATIVES; DRUGS	Welch, R.M. Findley, J.W.A. 1981 Drug Metabolism Reviews 12(2):261-277
0438 Milk	Ingestion	RIA	1	a) 455-20 ng/ml b) 16-22 ng/ml	a) Not given b) Not given	a) 1 and 12 hr after 60 mg b) Morphine (metabolite) 1 and 12 hr after 60 mg codiene as phosphate. Initial level 1.5 ng/ml at 0.5 hr Estimated from graph 32 yr old mother, week 7 of lactation MILK; COMPARATIVE EVALUATIONS; CAFFEINE; ADULTS; BLOOD PLASMA; LACTATION; ANALGESICS; ANTIPYRETICS; SEDATIVES; DRUGS	Welch, R.M. Findley, J.W.A. 1981 Drug Metabolism Reviews 12(3):261-277

Morpholine, 3-methyl-2-phenyl-
136-89-6
C11-H15-N-O
MW 177.24, BP 130-140 C at 12 mm Hg, 104 C at 1 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8430 Urine	Ingestion	Radiometry TLC Photometry UV NS GC	3	a) 11-25% of dose b) 17-21% of dose c) 16-26% of dose d) 62-82% of dose e) 79-99% of dose f) 85-101% of dose	a) 19% of dose b) 19% of dose c) 22% of dose d) 70% of dose e) 89% of dose f) 92% of dose	a) Phenmetrazine b) 5-Methyl-3-oxo-6-phenylmorpholine c) 3-Methyl-2-(4'-hydroxyphenyl)morpholine (12% free and 10% glucuronide) d) Total radioactivity, 0-24 hr e) Total radioactivity, 0-48 hr f) Total radioactivity, 0-72 hr 0-24 cumulative excretion in a)-c). Dose 25 mg (about 0.36 mg/kg and 3.12 uCi/person) URINE; DRUGS; METABOLISM; METABOLITES	Franklin, R.B. Dring, G. Williams, R.T. 1977 Drug Metabolism and Disposition 5(3):223-233

Nicotine (8 CI)
Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)- (9 CI)
54-11-5
C10-H14-N2
MW 162.23, MP <-80 C, BP 247 C (partial decomp) at 765 mm Hg, 123-125 C at 17 mm Hg, VP 1 mm Hg at 61.8 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8440 Blood	Inhalation	GC	11	a) Not given b) Not given c) Not given d) Not given	a) 6.6 +or- 6.5 ng/ml b) 19.8 +or- 11.3 ng/ml c) 12.9 +or- 3.8 ng/ml d) 22.9 +or- 11.2 ng/ml	a) Before 1st cigarette following overnight abstinence from smoking b) After cigarette c) Before 2nd cigarette, 6-36 min after 1st cigarette d) After cigarette Smokers of 40 or more cigarettes/day, wt 73.6 +or- 11.2 kg BLOOD; BREATH; DRUGS; CARBON MONOXIDE; NICOTINE; INHALATION; SMOKING	Herning, R.I. Jones, R.T. Benowitz, N.L. Mines, A.H. 1983 Clinical Pharmacology and Therapeutics 33(1):84-90

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Nicotine (8 CI)
Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)- (9 CI)
54-11-5
C10-H14-N2
MW 162.23, MP <-80 C, BP 247 C (partial decomp) at 745 mm Hg, 123-125 C at 17 mm Hg, VP 1 mm Hg at 61.8 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8401 Blood	Inhalation	GC	12	a) 18.4-55.1 ng/ml b) Not given c) Not given	a) 33.6 +or- 9.4 ng/ml b) 66 ng/ml c) 8 ng/ml	a) Usual brand, nicotine yield: 0.8-1.8 mg, mean 1.2 mg/cigarette, 11 cases b) High nicotine, 2.5 mg/cigarette, 8 cases c) Low nicotine, 0.4 mg/cigarette, 8 cases Peak level, 1 cigarette every 30 min for 15 hr. Level rose over first 0-6 hr, then plateaued until smoking stopped. b),c) estimated from graph 21-63 yr olds, smoked 20-45 (mean 29) cigarettes/day BLOOD; DRUGS; NICOTINE; INHALATION; SMOKING	Benowitz, N.L. Kuyt, F. Jacob, P., III 1982 Clinical Pharmacology and Therapeutics 32(6):758-764
8402 Blood, plasma	Injection Inhalation	GC	14	a) 0-11.6 ng/ml b) Not given c) Not given d) Not given e) Not given f) 29-6 ng/ml	a) 3.5 ng/ml +or- 3.5 ng/ml b) 13.2 +or- 5.6 ng/ml c) 29.6 +or- 15.6 ng/ml d) 37.0 +or- 3.5 ng/ml e) 24.0 +or- 11.8 ng/ml f) Not given	a) Preinfusion levels after not smoking overnight b) Maximal increase over a) after 30 min IV, 1 ug/kg/min, 4 subjects c) Maximal increase over a) after 30 min IV, 1.5 ug/kg/min, 5 subjects d) Maximal increase over a) after 30 min IV, 2 ug/kg/min, 5 subjects e) Mean b)-d), 14 subjects f) 30 and 180 min after 30 min IV of 2 ug/kg/min, 5 subjects, estimated from graph Healthy 21-34 yr old smokers (mean 18.4 cigarettes/day), mean nicotine consumption 23.2 mg/day During infusion pulse and blood pressure increased, fingertip skin temperature decreased. ADULTS; BLOOD PLASMA; DRUGS; NICOTINE; INHALATION; SMOKING	Benowitz, N.L. Jacob, P., III Jones, R.T. Rosenberg, J. 1982 Journal of Pharmacology and Experimental Therapeutics 221(2):368-372

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Nicotine (8 CI)
Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)- (8 CI)
54-11-5
C10-H14-N2
MW 162.23, MP <-80 C, BP 247 C (partial decomp) at 765 mm Hg, 123-125 C at 17 mm Hg, VP 1 mm Hg at 61.8 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8443 Blood, plasma	Ingestion Inhalation	GC	12	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not applicable	a) 11.9 ng/ml b) 23.2 ng/ml c) 15.2 ng/ml d) 16.3 ng/ml e) 18.3 ng/ml f) 37 ng/ml	a) Trough level, 2 mg nicotine gum hourly, 32 samples, 8 subjects b) Trough level, 4 mg nicotine gum hourly, 36 samples, 9 subjects c) Trough at time of natural urge to smoke, usual smoking schedule, 0.9) mg nicotine/cigarette, 36 samples, 12 subjects d) 1 hr after smoking, same subjects as c) e) Hourly smoking, 1.1 mg nicotine/cigarette, 18 samples f) Subject nauseated after chewing 2 mg gum Significant differences between b) and d), (p=0.01). Smokers (mean 27 cigarettes/day) with chronic obstructive pulmonary disease, mean age 55 yr Dizziness, oral soreness (denture wearers), nausea, stomachache, hiccups. All except oral soreness controlled by slower chewing. PULMONARY DISEASES; ADULTS; DISEASES; BLOOD PLASMA; DRUGS; COMPARATIVE EVALUATIONS; NICOTINE; SMOKING	McNabb, M.E. Ebert, R.V. McCusker, K. 1982 Journal of the American Medical Association 248(7):865-868
8444 Blood, plasma	Inhalation	GC	a) 5 b) 7 c) 8	a) 1-8 ng/ml b) 3-61 ng/ml c) 2-26 ng/ml	a) 4 +or- 3 ng/ml b) 22 +or- 18 ng/ml c) 6 +or- 7 ng/ml	a) Pipe smokers, never smoked cigarettes b) Pipe smokers, currently smoke cigarettes c) Pipe smokers, formerly smoked cigarettes After smoking one bowl of tobacco. Levels before smoking <3 ng/ml in all subjects. Significant difference between a),b) (p<002), between b),c) (p<0.03). 24-75 yr olds ADULTS; BLOOD PLASMA; DRUGS; COMPARATIVE EVALUATIONS; NICOTINE; INHALATION; SMOKING	McCusker, K. McNabb, M. Rose, R. 1982 Journal of the American Medical Association 248(5):577-578

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Nicotine (8 CI)
Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)- (9 CI)
54-11-5
C10-H14-N2
MW 162.23, MP <-80 C, BP 247 C (partial decomp) at 745 mm Hg, 123-125 C at 17 mm Hg, VP 1 mm Hg at 61.8 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8445 Blood, plasma	Inhalation	RIA	10	a) 36-24 ng/ml b) 6-4 ng/ml	a) Not given b) Not given	a) Cigarettes with 2.0 mg nicotine b) Cigarettes with 0.2 mg nicotine 10 and 60 minutes after smoking 2 cigarettes within 10 min Levels cortisol, growth hormone, and prolactin significantly higher in a) Estimated from graph Healthy smokers (at least 1 pack/day, 1.0 mg nicotine cigarettes), 35-45 yr old, CA CALIFORNIA; ADULTS; BLOOD PLASMA; DRUGS; HORMONES; NICOTINE; INHALATION; SMOKING	Wilkins, J.N. Carlson, H.E. Van Vunakis, H. Hill, M.A. Gritz, E. Jarvik, M.E. 1982 Psychopharmacology 70:305-308
8446 Blood, plasma	Inhalation		7	a) Not given b) Not given c) Not given d) Not given	a) 17.4 ng/ml b) 270 ng/ml c) 16.5 ng/ml d) 319 ng/ml	a) Level nicotine, experimental cigarette, 0.53 mg nicotine, 4.0 mg CO, 4.0 mg tar b) Level cotinine (metabolite) c) Level nicotine, experimental cigarette, 1.1 mg nicotine, 4.1 mg CO, 5.0 mg tar d) Level cotinine Sampled 2.5-3 min after smoking. No significant differences 23-45 yr old healthy cigarette smokers, consumption 15-35/day (mean 26.9), Sweden BREAST; SWEDEN; ADULTS; BLOOD PLASMA; DRUGS; CARBON INORGANIC COMPOUNDS; NICOTINE; INHALATION; SMOKING; TOBACCOS	Pagerstrom, K.-O. 1983 Psychopharmacology 77:164-167
8447 Milk						Review. General pharmacological principles associated with excretion of drugs and chemicals in human milk. PENNSYLVANIA; UNITED STATES; ADULTS; IMPAIRS; MILK; SALIVA; URINE; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTICOAGULANTS; ANTIPYRETICS; DIURETICS; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; CAFFEINE; NICOTINE; PESTICIDES; SODIUM; THEOPHYLLINES; ALCOHOLIC BEVERAGES; LACTATION; METABOLISM; METABOLITES; TOBACCOS	Berlin, C.M., Jr. 1981 Obstetrics and Gynecology 58(5)(supplement):17S-21S

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Nicotine (8 CI)
Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)- (9 CI)
54-11-5
C10-H14-N2
MW 162.23, MP <-80 C, BP 247 C (partial decomp) at 745 mm Hg, 123-125 C at 17 mm Hg, VP 1 mm Hg at 61.8 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8448 Saliva	Inhalation	GC	138	a) 3-90 nmol/l b) 9-190 nmol/l c) 15-150 nmol/l d) 150-1,100 nmol/l e) 616-30,000 nmol/l f) 2,000-6,000 nmol/l g) Not given h) Not given i) Not given j) Not given	a) 36.4 +or- 27.1 nmol/l b) 62.3 +or- 59.8 nmol/l c) Not given d) Not given e) Not given f) Not given g) 939.0 +or- 964.2 nmol/l h) 2,600.5 +or- 5,622.0 nmol/l i) 2,800.2 +or- 4,526.5 nmol/l j) 5,589.4 +or- 8,415.5 nmol/l	a) 26 non-smokers, not exposed to smokers b) 30 non-smokers, exposed to smokers c) 10 smokers, after 0 cigarettes d) 11 smokers, after 1 cigarette e) 8 smokers, after 10 cigarettes f) 2 smokers, after 20 cigarettes g) 8 smokers, non-inhalers h) 15 smokers, slight inhalers i) 32 smokers, medium inhalers j) 27 smokers, deep inhalers Significant differences. Levels correlated with number and time since last cigarette, not with inhalation habits. Range a)-f) estimated from graph Hospital laboratory, medical, dental staff and outpatients, United Kingdom ADULTS; SALIVA; URINE; AUTONOMIC DRUGS; DRUGS; NICOTINE; INHALATION; SMOKING	Feyerabend, C. Higenbottam, T. Russell, M.A.H. 1982 British Medical Journal 284:1002-1004
8449 Urine	Inhalation	GC	12	a) Not given b) Not given c) Not given	a) 0.809 +or- 0.190 mg b) 0.701 +or- 0.144 mg c) 0.500 +or- 0.122 mg S.E.	a) Full-length cigarettes b) Proximal half-length cigarettes (closer to filter) c) Distal half-length cigarettes (farther from filter) 48 hr total for 1 smoking day (a), b), or c)) followed by 1 day of abstinence. Same number of cigarettes smoked in all, but relative amount of nicotine greater in c), 5.15% and b), 5.75% than in a), 3.63%. Variations accounted for by puffing behavior. 20-47 yr old students, employees, CA CALIFORNIA; URINE; DRUGS; COMPARATIVE EVALUATIONS; NICOTINE; INHALATION; SMOKING	Gritz, E.R. Baer-Weiss, V. Jarvik, M.E. 1976 Clinical Pharmacology and Therapeutics 20(5):552-556

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Nicotine (8 CI)
Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)- (9 CI)
54-11-5
C10-H14-N2
MW 162.23, MP <-80 C, BP 247 C (partial decomp) at 745 mm Hg, 123-125 C at 17 mm Hg, VP 1 mm Hg at 61.8 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8450 Urine	Inhalation	GC	35	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given m) Not given n) Not given	a) 1.64 ug/ml b) 0.79 ug/ml c) 0.47 ug/ml d) 1.97 ug/ml e) 1.21 ug/ml f) 0.92 ug/ml g) 1.25 ug/ml h) 0.75 ug/ml i) 0.78 ug/ml j) 1.41 ug/ml k) 0.89 ug/ml l) 0.57 ug/ml m) 0.70 ug/ml n) 1.07 ug/ml	a) 10 subjects, wk 1, usual brand, 0.7-1.8 mg q 23.6 cigarettes/day b) Wk 2, low nicotine, 0.26 mg q mean 28 cigarettes/day c) Wk 3, low nicotine, 0.26 mg q mean 28.6 cigarettes/day d) 10 subjects, wk 1, usual brand, 1.20 mg q mean 23.7 cigarettes/day e) Wk 2, high nicotine, 1.34 mg q mean 27.1 cigarettes/day f) Wk 3, high nicotine 1.34 mg q mean 27.4 cigarettes/day g) 8 subjects, wk 1, usual brand, 1.12 mg q mean 31.5 cigarettes/day h) Wk 2, low tar, 0.48 mg q mean 31 cigarettes/day i) Wk 3, low tar, 0.76 mg q mean 27.8 cigarettes/day j) Wk 4, low tar, 1.40 mg q mean 25.7 cigarettes/day k) 7 subjects, wk 1, usual brand, 1.22 mg q mean 30.3 cigarettes/day l) Wk 2, high tar, 0.29 mg q mean 28.8 cigarettes/day m) Wk 3, high tar, 0.78 mg q mean 30.1 cigarettes/day n) Wk 4, high tar, 1.40 mg q mean 27.3 cigarettes/day Sampling times varied among different groups. Levels correlated with mg nicotine/cigarette. Number of cigarettes smoked decreased as nicotine increased, tar had no effect. 21-50 yr olds, 15-60 cigarettes/day URINE; DRUGS; NICOTINE; INHALATION; SMOKING	Goldfarb, T. Gritz, E.R. Jarvik, M.E. Stolerman, I.P. 1976 Clinical Pharmacology and Therapeutics 19(6):767-772

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Nicotine (8 CI)
Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)- (9 CI)
54-11-5
C10-H14-N2
MW 162.23, MP <-80 C, BP 247 C (partial decomp) at 745 mm Hg, 123-135 C at 17 mm Hg, VP 1 mm Hg at 61.8 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8451 Urine	Inhalation	GC	130	a) 0.6-140 nmol/l b) 4-616 nmol/l c) 10-2,000 nmol/l d) 130-8,000 nmol/l e) 1,000-10,500 nmol/l f) 8,500-30,000 nmol/l g) Not given h) Not given i) Not given j) Not given	a) 46.2 +or- 51.2 nmol/l b) 133.2 +or- 178.2 nmol/l c) Not given d) Not given e) Not given f) Not given g) 2,455.6 +or- 2,987.7 nmol/l h)7,786.6 +or- 10,947.5 nmol/l i) 8,329.2 +or- 10,538.7 nmol/l j) 9,426.6 +or- 9,883.4 nmol/l	a) 26 non-smokers, not exposed to smokers b) 30 non-smokers, exposed to smokers c) 10 smokers, after 0 cigarettes d) 13 smokers after 1 cigarette e) 8 smokers, after 10 cigarettes f) 3 smokers, after 20 cigarettes g) 0 smokers, non-inhalers h) 15 smokers, slight inhalers i) 32 smokers, medium inhalers j) 27 smokers, deep inhalers Significant difference Levels correlated with number, and time since last cigarette, not with inhalation habits. Range a)-f) estimated from graph Hospital laboratory, medical, dental staff and outpatients, United Kingdom ADULTS; SALIVA; URINE; AUTONOMIC DRUGS; DRUGS; NICOTINE; INHALATION; SMOKING	Feyerabend, C. Higenbottam, T. Russell, M.A.H. 1982 British Medical Journal 284:1002-1004

p-Acetophenetidide (8 CI)
Acetamide, N-(4-ethoxyphenyl)- (9 CI)
62-44-2
C10-H13-N-O2
MW 179.21, MP 134-135 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8452 Blood, plasma	Ingestion	RIA TLC	1	990-4 ng/ml 4000-300 ng/ml	a) Not given b) Not given	a) 0.5 and 12 hr after 325 mg b) Acetaminophen (metabolite), 0.5 and 12 hr after 325 mg phenacetin Estimated from graph 32 yr old mother, week 7 of lactation MILK; COMPARATIVE EVALUATIONS; CAFFEINE; ADULTS; BLOOD PLASMA; LACTATION; ANALGESICS; ANTIPYRETICS; SEDATIVES; DRUGS	Welch, R.M. Findlay, J.W.A. 1981 Drug Metabolism Reviews 12(2):261-277

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p-Acetophenetidide (8 CI)
Acetamide, N-(4-ethoxyphenyl)- (9 CI)
62-44-2
C10-H13-N-O2
MW 179.21, MP 134-135 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8453 Milk	Ingestion	RIA TLC	1	850-0 ng/ml 2500-300 ng/ml	a) Not given b) Not given	a) 0.5 and 12 hr after 325 mg b) Acetaminophen (metabolite) 3 and 12 hr after 325 mg phenacetin Estimated from graph 32 yr old mother, week 7 of lactation MILK; COMPARATIVE EVALUATIONS; CAFFEINE; ADULTS; BLOOD PLASMA; LACTATION; ANALGESICS; ANTIPYRETICS; SEDATIVES; DRUGS	Welch, B.H. Findlay, J.W.A. 1981 Drug Metabolism Reviews 12(2):261-277

Penicillin (VAN)
1406-05-9
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8454 Blood, serum	Injection	Microbiological	26	a) 3.93-0.006 ug/ml b) 0.16-0.01 ug/ml c) 0.15-0.01 ug/ml	a) Not given b) Not given c) Not given	a) 1 hr and 10 days after 300,000 units procaine penicillin and 900,000 units of benzathine penicillin G. IM, 13 patients, 11.9-22.6 kg b) 24 hr and 10 days after 600,000 units benzathine penicillin G, IM, 7 patients each <27 kg. Initial measurement 0.123 ug/ml at 1 hr c) 24 hr and 10 days after 1,200,000 units benzathine penicillin G, IM, 6 patients each >27 kg. Initial measurement 0.007 ug/ml at 1 hr Serum levels 0 on day 30. 1.0-10.7 yr old impetigo patients, wt 11.0-32.3 kg, mean body surface area 0.77 sq.m., Texas SKIN DISEASES; BLOOD SERUM; ANTIBIOTICS; DRUG THERAPY; DRUGS; CHILDREN; TEXAS.	Ginsburg, C.M. McCracken, G.H., Jr. Swinghaft, T.C. 1982 Pediatrics 69(4):452-454

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Penicillin (VAN)
1406-05-9
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8455 Urine	Injection	Microbiological	a) 8 b) 7	a) 0.6-12.5 ug/ml b) 0.71-8.2 ug/ml	a) Not given b) Not given	a) 30 days after 600,000 or 1,200,000 units benzathine penicillin G, in 8 of 9 patients, no measurable drug in serum b) 30 days after 300,000 units procaine penicillin and 900,000 units of benzathine penicillin G in 7 of 9 patients, no measurable drug in serum 1.8-10.7 yr old impetigo patients, wt 11.8-32.3 kg, mean body surface area 0.77 sq.m., Texas SKIN DISEASES; BLOOD SERUM; ANTIBIOTICS; DRUG THERAPY; DRUGS; CHILDREN; TEXAS; URINE	Ginsburg, C.M. McCracken, G.H., Jr. Sweighaft, T.C. 1982 Pediatrics 69(6):682-684

Phenethylamine, alpha-methyl-, (+-)- (8 CI)
Benzeneethanamine, alpha-methyl-, (+-)- (9 CI)
300-62-9
C9-H13-N
MW 135.20, BP 200-203 C at 760 mm Hg, 82-85 C at 13 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8456 Blood, cells	Ingestion	GC	6	a) Not given b) Not given	a) 44 +or- 8 ng/ml b) 38 +or- 3 ng/ml	a) Peak, 235 +or- 114 min after dose as salt b) Peak, 400 +or- 163 min after dose as resinate Dose 20 mg (free base) given as salt (phosphate) or cationic resinate. Level b) significantly lower than a) at 90, 120, and 240 min after dose Healthy volunteers, 22 +or- 2 yr old Nausea, stomach cramps, dry mouth, headache, cold feet, drowsiness, heart pounding, twitching muscles, anxiety. More severe side effects and residual side effects after dose as salt. ADULTS; BLOOD PLASMA; ERYTHROCYTES; URINE; DRUGS; PSYCHOTROPIC DRUGS; STIMULANTS; COMPARATIVE EVALUATIONS; BLOOD PRESSURE	Morselli, P.L. Placidi, G.F. Maggini, C. Gomeni, R. Guaselli, M. DeLizio, G. Standen, S. Tognoni, G. 1976 Psychopharmacologia 46:211-217

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Phenethylamine, alpha-methyl-, (+-)- (8 CI)
Benzeneethanamine, alpha-methyl-, (+-)- (9 CI)
300-62-9
C9-H13-N
MW 135.20, BP 200-203 C at 760 mm Hg, 82-85 C at 13 mm Hg

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8457 Blood, plasma	Ingestion	GC	6	a) Not given b) Not given	a) 36 +or- 6 ng/ml b) 27 +or- 4 ng/ml	a) Peak, 195 +or- 76 min after dose as salt b) Peak, 377 +or- 161 min after dose as resinate Dose 20 mg (free base) given as salt (phosphate) or cationic resinate form Level b) significantly lower than a) at 90, 120, and 240 min after dose Healthy volunteers, 22 +or- 2 yr old Nausea, stomach cramps, dry mouth, headache, cold feet, drowsiness, heart pounding, twitching muscles, anxiety. More severe side effects and residual side effects after dose as salt. ADULTS; BLOOD PLASMA; ERYTHROCYTES; URINE; DRUGS; PSYCHOTROPIC DRUGS; STIMULANTS; COMPARATIVE EVALUATIONS; BLOOD PRESSURE	Morselli, P.L. Placidi, G.F. Maggini, C. Gomeni, R. Guaselli, M. DeLisio, G. Standen, H. Tognoni, G. 1976 Psychopharmacologia 46:211-217
8458 Urine	Ingestion	GC	6	a) Not given b) Not given c) Not given d) Not given	a) 6.9 +or- 2.5% b) 5.7 +or- 2.1% c) 11.5 +or- 2.9% d) 9.8 +or- 2.1%	a) 12 hr, administered as salt b) 12 hr, administered as resinate c) 24 hr, as in a) d) 24 hr, as in b) % of dose excreted after 20 mg (free base) given as salt (phosphate) or cationic resinated form Healthy volunteers, 22 +or- 2 yr old Nausea, stomach cramps, dry mouth, headache, cold feet, drowsiness, heart pounding, twitching muscles, anxiety. More severe side effects and residual side effects after dose as salt. ADULTS; BLOOD PLASMA; ERYTHROCYTES; URINE; DRUGS; PSYCHOTROPIC DRUGS; STIMULANTS; COMPARATIVE EVALUATIONS; BLOOD PRESSURE	Morselli, P.L. Placidi, G.F. Maggini, C. Gomeni, R. Guaselli, M. DeLisio, G. Standen, H. Tognoni, G. 1976 Psychopharmacologia 46:211-217

Phenol, 4-(2-hydroxy-3-((1-methylethyl)amino)propoxy)-2,3,6-trimethyl-, 1-acetate
22666-55-7
C17-H27-N-O4
MW 309.40

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0010 Blood, serum	Injection Ingestion	GC/MS	47	a) 29.13-138.48 ug/l b) Not given c) 36.67-77.69 ug/l d) 81.37-173.01 ug/l	a) 90.45 +or- 8.61 ug/l b) 79.55 +or- 6.16 ug/l c) 60.31 +or- 4.56 ug/l d) 127.19 +or- 9.27 ug/l	a)After 6-25 mg deacetyl-metipranolol IV, 40 min, 17 cases b) Peak, 50 min after 40 mg oral metipranolol, 20 cases c) After 10 mg deacetyl-metipranolol IV, 40 min, 10 cases d) After 20 mg deacetyl-metipranolol IV, 40 min. Same 10 cases as c). Healthy volunteers, mean ages 31.4 yr, 33.7 yr and 37.3 yr. GERMANY; ADULTS; BLOOD SERUM; URINE; DRUGS; METABOLITES; ANTIHONIC DRUGS	Abshagen, U. Betzien, G. Kaufmann, B. Rudolo, G. 1982 European Journal of Clinical Pharmacology 21:293-301
0460 Urine	Injection Ingestion	GC/MS	47	a) 3.92-21.49% of dose b) 4.60-21.21% of dose c) 8.61-25.65% of dose d) Not given	a) 12.25 +or- 1.14% of dose b) 11.44 +or- 1.54% of dose c) 11.95 +or- 1.86% of dose d) 3.9 +or- 0.36% of dose	a) 0-24 hr after 6-25 mg deacetyl-metipranolol IV, 40 min, 17 cases b) 0-24 hr after 10 mg deacetyl-metipranolol IV, 40 min, 10 cases c) 0-24 hr, after 20 mg deacetyl-metipranolol IV, 40 min, 10 cases as in b) d) 0-24 hr after 40 mg oral metipranolol, 20 cases Deacetyl-drug measured. Healthy volunteers, mean ages 31.4 yr, 33.7 yr and 32.3 yr GERMANY; ADULTS; BLOOD SERUM; URINE; DRUGS; METABOLITES; ANTIHONIC DRUGS	Abshagen, U. Betzien, G. Kaufmann, B. Rudolo, G. 1982 European Journal of Clinical Pharmacology 21:293-301

Phenothiazine, 10-(2-(1-methyl-2-piperidyl)ethyl)-2-(methylthio)- (8 CI)
10H-Phenothiazine, 10-(2-(1-methyl-2-piperidinyl)ethyl)-2-(methylthio)- (9 CI)
50-52-2
C21-H26-N2-S2
MW 370.56, MP 72-74 C, BP 230 C at 0.02 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8461 Blood		HPLC	5	a) 2.63-8.85 mg/l b) 0-26.8 mg/l c) 0.78-2.04 mg/l d) 0.62-2.04 mg/l	a) Not given b) Not given c) Not given d) Not given	a) 2 overdose cases b) Metabolites in overdose cases c) Therapeutic doses d) Metabolites in therapeutic cases Metabolites measured: thioridazine-2-sulfoxide, thioridazine-2-sulfone, thioridazine ring sulfoxide Postmortems BLOOD; AUTOPSIES; BLOOD SERUM; LIVER; PSYCHOTROPIC DRUGS; COMPARATIVE EVALUATIONS; DRUGS	Poklis, A. Wells, C.E. Juengo, E.C. 1982 Journal of Analytical Toxicology 6:250-252
8462 Blood, serum	Ingestion	HPLC	7	a) Not given b) 0.10-0.36 mg/l c) Not given d) 0.22-1.76 mg/l	a) 0.24 mg/l b) Not given c) 0.72 mg/l d) Not given	a) Single dose, 100 mg b) Metabolites c) 100-800 mg/day d) Metabolites Metabolites measured: thioridazine-2-sulfoxide, thioridazine-2-sulfone, thioridazine ring sulfoxide Patients BLOOD; AUTOPSIES; BLOOD SERUM; LIVER; PSYCHOTROPIC DRUGS; COMPARATIVE EVALUATIONS; DRUGS	Poklis, A. Wells, C.E. Juengo, E.C. 1982 Journal of Analytical Toxicology 6:250-252
8463 Liver		EPP	3	a) Not given b) Not given c) Not given	a) 130 mg/kg b) 50 mg/kg c) 5.8 mg/kg	a) Overdose, 146 mg/kg chloral hydrate also present in sample b) Overdose, 29 mg/kg doxepin also present c) Therapeutic dose, 51 mg/kg salicylate also present Postmortems BLOOD; AUTOPSIES; BLOOD SERUM; LIVER; PSYCHOTROPIC DRUGS; COMPARATIVE EVALUATIONS	Poklis, A. Wells, C.E. Juengo, E.C. 1982 Journal of Analytical Toxicology 6:250-252

Phenothiazine, 2-chloro-10-(3-(dimethylamino)propyl)- (8 CI)
10H-Phenothiazine-10-propanamine, 2-chloro-N,N-dimethyl- (9 CI)
50-53-3
C17-H19-Cl-N2-S
MW 318.89

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8464 Blood, plasma		GC	a) 8 b) 9	a) 0.0-10.1 ng/ml b) 3.1-11.0 ng/ml	a) 5.8 +or- 1.9 ng/ml b) 7.1 +or- 0.9 ng/ml S.E.	a) Smokers b) Non-smokers Peak after 75 mg No significant difference Healthy Caucasians, 23-30 yr olds, smokers (62-89 kg, mean 74.2 kg) and non-smokers (61-89 kg, mean 76.1 kg) ADULTS; HYPOTENSION; BLOOD PLASMA; DRUGS; TRANQUILISERS; BLOOD PRESSURE; METABOLISM; SMOKING	Pantuck, E.J. Pantuck, C.B. Anderson, K.E. Conney, A.H. Kappas, A. 1982 Clinical Pharmacology and Therapeutics 31(4):533-538

Phthalazine, 1-hydrazino- (8 CI)
1(2H)-Phthalazinone, hydrazone (9 CI)
86-56-6
C8-H8-N4
MW 160.18, MP 172-173 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8465 Blood, plasma	Ingestion	TLC Fluorometry	7	a) Not given b) Not given	a) 125 +or- 40 ug/l b) 176 +or- 83 ug/l S.E.	a) 2.3 +or- 0.9 hr after 25 mg, 7 subjects b) 1.6 +or- 0.8 hr after 25 mg hydralazine, 2.5 mg bendroflumethiazide and 60 mg propranolol, 7 subjects Peaks Healthy 20-30 yr olds, wt 53-78 kg GERMANY; ADULTS; BLOOD PLASMA; URINE; ANTIHYPERTENSIVE AGENTS; DIURETICS; DRUG INTERACTION; DRUGS	Schafer-Korting, M. Mutschler, E. 1982 European Journal of Clinical Pharmacology 21:319-323

Phthalic acid, bis(2-ethylhexyl) ester (8 CI)
1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester (9 CI)
117-81-7
C24-H38-O4
MW 390.54

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8466 Urine			a) 1 b) 1	a) Not given b) Not given	a) 55% of dose b) 50% of dose	a) Total metabolites, 8 hr after 94.7 mg in 4 hr via platelet concentrate infusions b) Total metabolites 8 hr after 174.3 mg in 1.5 hr via platelet concentrate infusion. About 62% of dose at 110 hr Estimated from graph Cancer patients URINE; METABOLISM; METABOLITES; INDUSTRIAL CHEMICALS	Peck, C.C. Albro, P.W. 1982 Environmental Health Perspectives 45:11-17

Piperazine, 1-(4-amino-6,7-dimethoxy-2-quinazolinyl)-4-(2-furoyl)- (8 CI)
Piperazine, 1-(4-amino-6,7-dimethoxy-2-quinazolinyl)-4-(2-furanylcarbonyl)- (9 CI)
19216-56-9
C19-H21-N5-O4
MW 383.42, MP 270-280 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8467 Blood, plasma	Injection Ingestion	HPLC	8	a) 23-48 ng/ml b) 3.3-13.0 ng/ml c) 1.3-6.0 ng/ml d) 4.9-11.4 ng/ml e) 7.9-18.6 ng/ml f) 11.3-33.0 ng/ml g) 13.3-21.3 ng/ml h) Not applicable	a) Not given b) 6.7 +or- 2.9 ng/ml c) 3.3 +or- 1.8 ng/ml d) 7.6 +or- 2.3 ng/ml e) 12.8 +or- 4.0 ng/ml f) 20.5 +or- 8.1 ng/ml g) 16.5 +or- 4.2 ng/ml h) 30.0 ng/ml	a) Peaks, after 0.5 mg, IV, 4 patients. Estimated from graph b) Peaks, 3-120 min after 0.5 mg, oral, 8 patients c) Steady-state after 0.5 mg, oral, 3x/day for 2 wk, 8 patients d) Steady-state after 1 mg, oral, 3x/day for 2 wk, 8 patients e) Steady-state after 2 mg, oral, 3x/day for 2 wk, 7 patients f) Steady-state after 3 mg, oral, 3x/day for 2 wk, 5 patients g) Steady-state after 4 mg, oral, 3x/day for 2 wk, 3 patients h) Steady-state after 5 mg, oral, 3x/day for 2 wk, 1 patient Untreated hypertensives, wt 76-110 kg (mean 82.8 kg). ADULTS; HYPERTENSION; BLOOD PLASMA; ANTIHYPERTENSIVE AGENTS; DRUG THERAPY; DRUGS	Grahnen, A. Seidman, P. Lindstrom, B. Waglund, K. von Bahr, C. 1981 Clinical Pharmacology and Therapeutics 30(4):439-446

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Piperazine, 1-(4-amino-6,7-dimethoxy-2-quinazolinyl)-4-(2-furoyl)- (8 CI)
Piperazine, 1-(4-amino-6,7-dimethoxy-2-quinazolinyl)-4-(2-furanylcarbonyl)- (9 CI)
19216-56-9
C19-H21-N5-O4
MW 383.42, MP 276-280 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8468 Blood, plasma		HPLC	16	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 5.41 +or- 1.75 ng/ml b) 6.36 +or- 1.99 ng/ml c) 4.85 +or- 2.86 ng/ml d) 5.40 +or- 1.61 ng/ml e) 4.56 +or- 2.63 ng/ml	a) 1 hr after 0.5 mg, 4 patients b) 2.5 hr after 1-2 mg, 6 patients c) 1.9 hr after 0.5 mg, 5 patients d) 2.1 hr after 5.7 mg, 5 patients e) 2.6 hr after 10 mg, 5 patients Peaks Results corrected for dose Marked reduction in blood pressure after 1st dose in a), minimal reduction in c). Hypertensives, mean age 48 +or- 3 yr. CANADA; ADULTS; HYPERTENSION; BLOOD PLASMA; DRUGS; ANTIHYPERTENSIVE AGENTS; BLOOD PRESSURE	Larochelle, P. DuCouich, P. Hamet, R. Larocque, P. Armstrong, J. 1980 Hypertension 4(1):93-101

Piperidine, 1-(1-phenylcyclohexyl)-
77-10-1
C17-H25-N
MW 243.38, MP 46 C, BP 135-137 C at 1 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8469 Blood		GC/MS	26	6-240 ug/l	Not given	Persons involved in traffic violations, narcotics use, or unusual behavior 17-29 yr olds, CA Glassy eyes, ataxia, incoherence CALIFORNIA; BLOOD; ANALGESICS; ANESTHETICS; DRUG ABUSE; DRUGS; FORENSIC MEDICINE; MEASUREMENT METHODS	Pearce, D.S. 1976 Clinical Chemistry 22(10):1623-1626
8470 Blood		GC/MS	45	Not detected-185 ng/ml	81 ng/ml	After 5.5-18 mo storage. Original measurements slightly higher (mean 86 ng/ml) Subjects arrested for various violations, Orange County, CA CALIFORNIA; BLOOD; DRUG ABUSE; DRUGS; FORENSIC MEDICINE; MEASUREMENT METHODS	Clardy, D.O. Ragle, J.L. 1981 Clinical Toxicology 18(8):929-934

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Piperidine, 1-(1-phenylcyclohexyl)-
77-10-1
C17-H25-N
MW 243.38, MP 46 C, BP 135-137 C at 1 mm Hg

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8471 Blood, plasma	Injection	Radiometry Chromatography	3	a) 2.7-3.7 ng Eq/ml b) 0.9-1.5 ng Eq/ml c) 1.8-2.1 ng Eq/ml d) 2.5-3.5 ng Eq/ml e) 0.9-1.5 ng Eq/ml f) 1.5-1.9 ng Eq/ml	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) Total drug b) PCP c) Polar metabolites d) Total drug e) PCP f) Polar metabolites 2-7 hr after 0.5 mg. Subjects in a)-c) received sodium carbonate (urinary pH 6.9-7.8), d)-f) ammonium chloride (urinary pH 5.6-6.7) Range of means Healthy 20-22 yr olds, wt 70.3 kg each BLOOD PLASMA; SALIVA; URINE; SWEAT; DRUGS; PSYCHOTROPIC DRUGS; METABOLITES	Perez-Reyes, M. DiGuiseppi, S. Brine, D.R. Smith, H. Cook, C.E. 1982 Clinical Pharmacology and Therapeutics 32(5):635-641
8472 Saliva	Injection	Radiometry Chromatography	3	a) 1.3-1.5 ng Eq/ml b) 0.6-0.9 ng Eq/ml c) 0.7-0.8 ng Eq/ml d) 1.0-1.6 ng Eq/ml e) 0.5-1.1 ng Eq/ml f) 0.5-0.7 ng Eq/ml	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) Total drug b) PCP c) Polar metabolites d) Total drug e) PCP f) Polar metabolites 2-7 hr after 0.5 mg. Subjects in a)-c) received sodium carbonate (urinary pH 6.9-7.8), d)-f) ammonium chloride (urinary pH 5.6-6.7) Range of means Healthy 20-22 yr olds, wt 70.3 kg each BLOOD PLASMA; SALIVA; URINE; SWEAT; DRUGS; PSYCHOTROPIC DRUGS; METABOLITES	Perez-Reyes, M. DiGuiseppi, S. Brine, D.R. Smith, H. Cook, C.E. 1982 Clinical Pharmacology and Therapeutics 32(5):635-641
8473 Sweat	Injection	Radiometry Chromatography	1	Not applicable	0.0017% of total dose/ml	6 hr after 0.5 mg. Estimated to equal 1% of total dose per day. Healthy 20-22 yr olds, wt 70.3 kg each BLOOD PLASMA; SALIVA; URINE; SWEAT; DRUGS; PSYCHOTROPIC DRUGS; METABOLITES	Perez-Reyes, M. DiGuiseppi, S. Brine, D.R. Smith, H. Cook, C.E. 1982 Clinical Pharmacology and Therapeutics 32(5):635-641

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Piperidine, 1-(1-phenylcyclohexyl)-
77-10-1
C17-H25-N
MW 243.38, MP 46 C, BP 135-137 C at 1 mm Hg

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8474 Urine	Injection	Radiometry Chromatography	3	a) 6.7-14.0 ug Eq b) 0.2-2.5 ug Eq c) 5.9-11.6 ug Eq d) 9.2-25.0 ug Eq e) 1.0-12.7 ug Eq f) 7.6-11.8 ug Eq	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) Total drug b) PCP c) Polar metabolites d) Total drug e) PCP f) Polar metabolites 1-7 hr after 0.5 mg. Urinary pH 6.9-7.8 in a)-c) and 5.6-6.7 in d)-f). Mean total PCP excretion in 7 hr was 6.5 ug in b) and 27.9 ug in e) Range of means Healthy 20-22 yr olds, wt 70.3 kg each BLOOD PLASMA; SALIVA; URINE; SWEAT; DRUGS; PSYCHOTROPIC DRUGS; METABOLITES	Perez-Reyes, M. DiGuiseppi, S. Brine, D.R. Smith, H. Cook, C.H. 1982 Clinical Pharmacology and Therapeutics 32(5):635-641

Piperidine, 3-((1,3-benzodioxol-5-yloxy)methyl)-4-(4-fluorophenyl)-, trans-(-)-
61869-08-7
C19-H20-F-N-O3
MW 329.39

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8475 Blood, plasma	Injection Ingestion	GC	8	a) 25-3 ng/ml b) 41-6 ng/ml c) 20-7 ng/ml d) 32-5 ng/ml e) 100-4 ng/ml f) 98-4 ng/ml g) 38-3 ng/ml h) 60-3 ng/ml	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 2.5 and 48 hr after 0.60 mg/kg, oral. Initially 4 ng/ml at 0.5 hr b) 2.5 and 48 hr after 0.68 mg/kg, oral. Initially 3 ng/ml at 0.5 hr c) 2.5 and 48 hr after 0.51 mg/ml, oral. Initially 3 ng/ml at 0.5 hr d) 2.5 and 48 hr after 0.63 mg/kg, oral. Initially 10 ng/ml at 0.5 hr e) 10 min and 27 hr after start of 24-30 min IV, 0.37 mg/kg f) 10 min and 27 hr after start of 24-30 min IV, 0.42 mg/kg g) 10 min and 33 hr after start of 24-30 min IV, 0.32 mg/kg h) 10 min and 48 hr after start of 24-30 min IV, 0.32 mg/kg Estimated from graph Healthy volunteers Some suffered from cold, anxiety and vomiting. Some experienced nausea, headache, fatigue and repeated yawning in both oral and IV tests ANTIDEPRESSIVE AGENTS; COMPARATIVE EVALUATIONS; ADULTS; BLOOD PLASMA	Lund, J. Thayssen, P. Mengel, H. Pedersen, O.L. Kristensen, C.B. Gram, L.F. 1982 Acta Pharmacologica et Toxicologica 51:351-357

Platinum, diamminedichloro-, cis- (8 CI)
Platinum, diamminedichloro-, (SP-4-2)- (9 CI)
15663-27-1
Cl2-H6-N2-Pt
MW 300.95

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8476 Urine	Injection	HPLC	11	a) 39.0-5.0 ug/ml b) 28.0-1.0 ug/ml	a) Not given b) Not given	a) 0.5 and 3.5 hr after 60 mg/sq m, AM dose. Initial measurement 17.0 ug/ml b) 0.5 and 4.0 hr after 60 mg/sq m, PM dose. Initial measurement 11 ug/ml Range of means, estimated from graph 25-74 yr old patients with advanced malignancies After evening infusions: greater urine output, lower peak concentrations, lower areas under concentration-time curve. CIRCADIAN RHYTHMS; ADULTS; CARCINOMAS; URINE; ANTITUMOR AGENTS; DRUGS; COMPARATIVE EVALUATIONS; CHEMOTHERAPY	Hrushesky, W.J.M. Borch, R. Levi, F. 1982 Clinical Pharmacology and Therapeutics 32(3):330-339

Pregn-4-ene-21-carboxylic acid, 7-(acetylthio)-17-hydroxy-3-oxo-, gamma-lactone, (7alpha,17alpha)-
52-01-7
C24-H32-O4-S
MW 416.59, MP 134-135 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8477 Blood, plasma	Ingestion	Fluorometry	12	a) 6-24 ug/100 ml b) 6-27 ug/100 ml c) 2-9 ug/100 ml d) 2-7 ug/100 ml	a) Not given b) Not given c) Not given d) Not given	a) Initial level and 3 hr after 9th dose of 100 mg/day. 13 ug/100 ml at 8 hr b) Initial level and 3 hr after 10th dose of 100 mg/day. 14 ug/100 ml at 8 hr c) Initial level and 3 hr after 9th dose of 25 mg/kg. 4 ug/100 ml at 8 hr d) Initial level and 2 hr after 10th dose of 25 mg/day. 4 ug/100 ml at 8 hr Estimated from graph. Measured as canrenone, active metabolite Healthy 18-35 yr olds DIURETICS; CORTICOSTEROIDS; BLOOD PLASMA; KIDNEYS; URINE; DRUGS; COMPARATIVE EVALUATIONS; ADULTS; METABOLITE	McInnes, G.T. Shelton, J.R. Harrison, I.R. Perkins, R.M. Palmer, R.F. 1982 British Journal of Clinical Pharmacology 13:187-194

Pregna-1,4-diene-3,11,20-trione, 17,21-dihydroxy-
53-03-2
C21-H26-O5
MW 358.44, MP 235 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8470 Milk						Review. General pharmacological principles associated with excretion of drugs and chemicals in human milk. PENNSYLVANIA; UNITED STATES; ADULTS; INFANTS; MILK; SALIVA; URINE; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTICOAGULANTS; ANTIPYRETICS; DIURETICS; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; CAFFEINE; NICOTINE; PESTICIDES; SODIUM; THEOPHYLLINES; ALCOHOLIC BEVERAGES; LACTATION; METABOLISM; METABOLITES; TOBACCOS	Berlin, C.H., Jr. 1981 Obstetrics and Gynecology 58(5)(supplement):17S-23S

Pregnan-20-one, 11-(dimethylamino)-2-ethoxy-3-hydroxy-, (2beta,3alpha,5alpha,11alpha)-
62571-87-3
C25-H43-N-O3
MW 405.62

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8479 Blood, plasma	Injection	GC		a) Not given b) Not given	a) 265 +or- 81.4 ng/ml b) 236 +or- 66.0 ng/ml	a) 28.9 +or- 5.65 min after 0.92 +or- 0.164 mg/kg b) 32.9 +or- 7.21 minutes after 2 or 3 doses 1.11 +or- 0.090 mg/kg Minor gynecologic surgical patients. ADULTS; BLOOD PLASMA; ANESTHETICS; COMPARATIVE EVALUATIONS; DRUGS; HYDROIDS	Dunn, G.L. Morison, D.H. McChesney, J. Pine, W. Kumana, C.R. Gupta, H.N. 1982 Journal of Clinical Pharmacology 22:318-320

Pyridine, 2-((2-(dimethylamino)ethyl)(p-methoxybenzyl)amino)- (8 CI)
1,2-Ethanediamine, N-((4-methoxyphenyl)methyl)-N',N'-dimethyl-N-2-pyridinyl- (9 CI)
91-80-5
C17-H23-N3-O
MW 285.38, MP 201 C at 5 mm Hg, 168-172 C at 0.06 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8486 Blood	Ingestion	GC	1	Not applicable	11 mg/l	Suicide victim, dose unknown (blood level 11 mg/l) 25 yr old, wt 56 kg CALIFORNIA; SUICIDE; BLOOD; BRAIN; LIVER; DRUG ABUSE; DRUGS; FORENSIC MEDICINE	Johnson, G.R. 1981 Clinical Toxicology 18(8):907-909
8481 Brain	Ingestion	GC	1	Not applicable	71 mg/kg	Suicide victim, dose unknown (blood level 11 mg/l) 25 yr old, wt 56 kg CALIFORNIA; SUICIDE; BLOOD; BRAIN; LIVER; DRUG ABUSE; DRUGS; FORENSIC MEDICINE	Johnson, G.R. 1981 Clinical Toxicology 18(8):907-909
8482 Liver	Ingestion	GC	1	Not applicable	18 mg/kg	Suicide victim, dose unknown (blood level 11 mg/l) 25 yr old, wt 56 kg CALIFORNIA; SUICIDE; BLOOD; BRAIN; LIVER; DRUG ABUSE; DRUGS; FORENSIC MEDICINE	Johnson, G.R. 1981 Clinical Toxicology 18(8):907-909

Pyrrole-2-acetic acid, 1-methyl-5-p-toluoyl- (8 CI)
1H-Pyrrole-2-acetic acid, 1-methyl-5-(4-methylbenzoyl)- (9 CI)
26171-23-3
C15-H15-N-O3
MW 257.30, MP 155-157 C (dec)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8483 Blood, plasma	Ingestion	HPLC	5	a) 8.29-78.91 ug/ml b) 4.09-13.62 ug/ml	a) 45.39 +or- 28.64 ug/ml b) 10.11 +or- 3.50 ug/ml	a) Peaks, 03 +or- 28.9 min after final dose b) Metabolite peaks 105 +or- 80.77 min after final dose Dose 400 mg/6 hr for 1 wk. Rheumatoid arthritis patients with knee effusions. CA CALIFORNIA; ADULTS; RHEUMATOID ARTHRITIS; BLOOD PLASMA; SYNOVIAL FLUID; URINE; ANTI-INFLAMMATORY AGENTS	Drumpoole, H.H. Furst, D.H. Desiraju, N.K. Hayek, R.K. Kirschenbaum, M.A. Paulus, H.H. 1982 Clinical Pharmacology and Therapeutics 32(3):371-377

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Pyrrole-2-acetic acid, 1-methyl-5-p-toluoyl- (8 CI)
1H-Pyrrole-2-acetic acid, 1-methyl-5-(4-methylbenzoyl)- (9 CI)
26171-23-3
C15-H15-N-03
MW 257.30, MP 155-157 C (dec)

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8484 Synovial fluid	Ingestion	HPLC	5	a) 8-0.5 ug/ml b) 7-0.11 ug/ml	a) Not given b) Not given	a) 4 and 24 hr after final dose b) Metabolite, 4 and 24 hr after final dose Dose 400 mg/6 hr for 1 wk Estimated from graph Rheumatoid arthritis patients with knee effusions. CA Total prostaglandin E levels suppressed for at least 24 hr after last dose of tolmetin. CALIFORNIA; ADULTS; RHEUMATOID ARTHRITIS; BLOOD PLASMA; SYNOVIAL FLUID; URINE; ANTI-INFLAMMATORY AGENTS	Brungoole, S.H. Furst, D.E. Desiraju, R.K. Hayak, B.K. Kirschenbaum, M.A. Paulus, H.E. 1982 Clinical Pharmacology and Therapeutics 32(3):371-377
8485 Urine	Ingestion	HPLC	5	0.75-1.04% of dose	0.90 +or- 0.11% of dose	Drug and metabolite after final dose of 400 mg/6 hr for 1 wk Rheumatoid arthritis patients with knee effusions. CA CALIFORNIA; ADULTS; RHEUMATOID ARTHRITIS; BLOOD PLASMA; SYNOVIAL FLUID; URINE; ANTI-INFLAMMATORY AGENTS	Brungoole, S.H. Furst, D.E. Desiraju, R.K. Hayak, B.K. Kirschenbaum, M.A. Paulus, H.E. 1982 Clinical Pharmacology and Therapeutics 32(3):371-377

Pyrrole-2-acetic acid, 5-(p-chlorobenzoyl)-1,4-dimethyl- (8 CI)
1H-Pyrrole-2-acetic acid, 5-(4-chlorobenzoyl)-1,4-dimethyl- (9 CI)
33369-31-2
C15-H14-Cl-N-O3
MW 291.75

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8486 Blood, plasma	Ingestion	HPLC	5	a) 4.6-0.1 ug/ml b) 3.0-0.2 ug/ml c) 0.17-0 ug/ml	a) Not given b) Not given c) Not given	a) 0.5 and 12 hr. Initially 4 ug/ml at 0.25 hr b) zomepirac glucuronide, metabolite, 1.0 and 12 hr. Initially 1.25 ug/ml at 0.25 hr c) Hydroxyzomepirac, metabolite, 2 and 6 hr. Initially 0.10 ug/ml at 0.25 hr Estimated from graph. Dose 200 mg as Na salt. Healthy 27 yr olds (mean), wt 65.3 +or- 3.1 kg. ADULTS; URINE; BLOOD PLASMA; ANALGESICS; COMPARATIVE EVALUATIONS	O'Neill, P.J. Torgoy, E.A. Bonzi, M.L. Williams, R.L. Benet, L.Z. 1982 Journal of Clinical Pharmacology 22:470-476
8487 Urine	Ingestion	Chromatography	5	a) 1-5% of dose b) 11-71% of dose c) 1-4% of dose	a) Not given b) Not given c) Not given	a) Drug b) Zomepirac glucuronide, metabolite c) Hydroxyzomepirac, metabolite Excretions during 24 hr after 200 mg as Na salt. Estimated from graph. Healthy 27 yr olds (mean), wt 65.3 +or- 3.1 kg. ADULTS; URINE; BLOOD PLASMA; ANALGESICS; COMPARATIVE EVALUATIONS; DRUGS	O'Neill, P.J. Torgoy, E.A. Bonzi, M.L. Williams, R.L. Benet, L.Z. 1982 Journal of Clinical Pharmacology 22:470-476

Quinidine (8 CI)
Cinchonan-9-ol, 6'-methoxy-, (9S)- (9 CI)
56-54-2
C20-H24-N2-O2
MW 324.41, MP 174-175 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8488 Blood, plasma						Review. Assessment of clinical use of laboratory determinations for metals, anticonvulsive agents, and cardiovascular drugs. ADULTS; AGE; CHILDREN; ANEMIA; BONE DISEASES; DISEASES; MENTAL RETARDATION; METAL POISONING; NUTRITIONAL DEFICIENCIES; SKIN DISEASES; BLOOD; BLOOD PLASMA; BLOOD SERUM; LIVER; URINE; ANTIARRHYTHMIC AGENTS; ANTICONVULSANTS; DIURETICS; DRUG THERAPY; DRUGS; HYPNOTICS; MUSCLE RELAXANTS; SEDATIVES; TRANQUILIZERS; REVIEW; COPPER; DIAZEPAM; IRON; LEAD; LITHIUM; THEOPHYLLINES; ZINC; PAINTS	Weiss, H.B. Rosenthal, I.M. 1970 Journal of Analytical Toxicology 2:166-171
8489 Blood, plasma	Ingestion		a) 1 b) 1 c) 1 d) 1 e) 1 f) 1 g) 1 h) 1	a) 1.46-0.68 ug/ml b) 1.26-0.66 ug/ml c) 2.36-0.39 ug/ml d) 1.91-0.12 ug/ml e) 2.77-0.66 ug/ml f) 2.25-0.26 ug/ml g) 2.79-0.30 ug/ml h) 3.26-0.23 ug/ml	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) Days 8 and 10. Initial measurement, 0.77 ug/ml, day 3 b) Days 8 and 10. Initial measurement, 0.71 ug/ml, day 3 c) Days 3 and 10 d) Days 5 and 10. Initial measurement, 1.66 ug/ml, day 3 e) Days 3 and 10 f) Day 3 and 10 g) Days 5 and 10. Initial measurement, 1.17 ug/ml, day 3 h) Days 5 and 10. Initial measurement 2.06 ug/ml, day 3 Dose, 750 mg/day, 7 days. Also receiving 0.1-0.3 mg acetyldigoxin or 0.05-0.1 mg methyldigoxin Anuric patients on hemodialysis for 9-52 months Complete left bundle branch block on day 3 in one patient. Disappeared after discontinuation of quinidine. No new arrhythmias in any patient. Flatulence, diarrhea, constipation, dizziness in some. KIDNEY DISEASES; BLOOD PLASMA; BLOOD SERUM; DRUG INTERACTION; HEMODIALYSIS	Doering, W. Fichtl, B. Herrmann, H. Rosenfelder, H. 1982 European Journal of Clinical Pharmacology 21:281-285

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Quinidine (8 CI)
Cinchonan-9-ol, 6'-methoxy-, (9S)- (8 CI)
56-54-2
C20-H24-N2-O2
MW 324.41, MP 174-175 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0498 Blood, serum						Review. Usefulness of serum levels of cardiac drugs in clinical practice. BLOOD SERUM; ANESTHETICS; ANTIARRHYTHMIC AGENTS; ANTIHYPERTENSIVE AGENTS; DIURETICS; DRUGS; STIMULANTS; REVIEW	Pennock, B.E. 1978 American Family Physician 17(4):190-196

Retinoic acid, 13-cis-
4759-48-2
C20-H28-O2
MW 300.44

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0491 Blood	Ingestion	HPLC	12	a) 210-8 ng/ml b) 58-6 ng/ml	a) Not given b) Not given	a) 2.5 and 72 hr after 100 mg orally. Initial measurement 105 ng/ml. Isotretinoin b) 2 and 10 hr after 100 mg orally. Initial measurement 30 ng/ml. Tretinoin Range of means. Maximum levels of 78-511 ng/ml occurred between 1 and 4 hr. Secondary maxima occurred between 6 and 24 hr Healthy 30-61 yr olds, wt 66.8-95.5 kg BLOOD; DRUG THERAPY; DRUGS	Khoo, K.-C. Roik, D. Colburn, W.A. 1982 Journal of Clinical Pharmacology 22:395-402
0492 Blood, plasma	Ingestion	HPLC	10	a) 0-740 ng/ml b) Not given c) Not given d) Not given e) Not given f) 830-1950 ng/ml g) 75-400 ng/ml	a) 250 ng/ml b) 240 ng/ml c) 220 ng/ml d) 700 ng/ml e) 240 ng/ml f) 1160 ng/ml g) 242 ng/ml	a) 0.5 mg/kg (days 1-2) b) 1.0 mg/kg (days 5-7) c) 1.0 mg/kg d) 2.0 mg/kg (days 11-14) e) 3.0 mg/kg f) 4.0 mg/kg (day 25-28) g) 4.0 mg/kg Peaks (a), b) d), f)) and troughs (c), e), g)). One dose/day in a) others, two/day. Dose increased 0.5 mg/kg every 2-4 days. 36 wk study. BLOOD PLASMA; DRUG THERAPY; DRUGS; CHEMOTHERAPY	Kerr, I.B. Lippman, M>E. Jenkins, J. Myers, C.E. 1982 Cancer Research 42:2069-2073

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Retinoic acid, 13-cis-
4759-48-2
C20-H28-O2
MW 300.44

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8493 Blood, plasma	Ingestion	HPLC	a) 5 b) 1 c) 1 d) 2 e) 5 f) 6	a) 0.20-0.86 ug/ml b) Not applicable c) Not applicable d) 0.15-1.66 ug/ml e) 0.15-1.15 ug/ml f) 0.15-1.15 ug/ml	a) 0.50 +or- 0.26 ug/ml b) 1.10 ug/ml c) 1.15 ug/ml d) 0.61 ug/ml e) Not given f) 0.74 +or- 0.35 ug/ml	a) 3 mg/kg, day 1 b) 3 mg/kg, day 12 c) 3 mg/kg, day 60 d) 4 mg/kg, day 1 e) 5 mg/kg, day 1 f) Subjects in d) and e) excluding one Peaks, 120-360 min (a)-c)) and 180-720 min (d)-f)) during continuous daily administration 20-75 yr old cancer patients, wt 45.0-91.0 kg ADULTS; BLOOD PLASMA; CHEMOTHERAPY	Goodman, G.E. Hinepahr, J.G. Alberts, D.S. Davis, T.P. Leigh, S.A. Chen, H.S.G. Meyskens, F.L. 1982 Cancer Research 42:2887-2891

Salicylic acid (8 CI)
Benzoic acid, 2-hydroxy- (9 CI)
69-72-7
C7-H6-O3
MW 138.12, MP 157-159 C, BP about 211 C at 20 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8494 Blood, plasma	Ingestion	Fluorometry	1	33.0 ug/ml-3.0 ug/ml	Not given	1 and 12 hr after 650 mg aspirin. Initial level 30 ug/ml at 0.5 hr. Estimated from graph 32 yr old mother, week 7 of lactation KILE; COMPARATIVE EVALUATIONS; CAFFEINE; ADULTS; BLOOD PLASMA; LACTATION; ANALGESICS; ANTIPYRETICS; SEDATIVES; DRUGS	Welch, R.M. Findley, J.W.A. 1981 Drug Metabolism Reviews 12(2):261-277

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Salicylic acid (8 CI)
Benzoic acid, 2-hydroxy- (9 CI)
69-72-7
C7-H6-O3
MW 138.12, MP 157-159 C, BP about 211 C at 20 mm Hg

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8405 Blood, plasma	Ingestion	HPLC	6	a) Not given b) Not given c) Not given	a) 293.5 +or- 83.3 umol/l b) 328.3 +or- 66.7 umol/l c) 330.4 +or- 123.9 umol/l	a) 2.90 +or- 0.38 hr after 600 mg compressed aspirin b) 2.13 +or- 0.04 hr after 650 mg Bufferin c) 1.53 +or- 0.92 hr after 600 mg Asprocleer Peaks Normal 20-42 yr olds Inhibition of platelet aggregation, all preparations AUSTRALIA; ADULTS; BLOOD PLASMA; ANTICOAGULANTS; COMPARATIVE EVALUATIONS; DRUGS	Richert, D.J. Bochner, F. Imhoff, D.M. Watts, S. Lloyd, J.V. Field, J. Gabb, B.W. 1983 Clinical Pharmacology and Therapeutics 33(3):367-376
8406 Milk	Ingestion	Fluorometry	1	1.12-0.8 ug/ml	Not given	3 and 12 hr after 650 mg aspirin. Initial level 0.4 ug/ml at 0.5 hr. Estimated from graph 32 yr old mother, week 7 of lactation MILK; COMPARATIVE EVALUATIONS; CAFFEINE; ADULTS; BLOOD PLASMA; LACTATION; ANALGESICS; ANTIPYRETICS; SEDATIVES; DRUGS	Welch, R.M. Findley, J.W.A. 1981 Drug Metabolism Reviews 12(2):261-277

Salicylic acid acetate (8 CI)
Benzoic acid, 2-(acetyloxy)- (9 CI)
50-78-2
C9-H8-O4
MW 180.2, MP 135 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0497 Blood	Ingestion		a) 13 b) 11 c) 10 d) 6 e) 3	a) 22.0-25.1 mg/dl b) 19.7-23.5 mg/dl c) 20.2-23.9 mg/dl d) 17.8-20.3 mg/dl e) 18-25 mg/dl	a) 24.2 +or- 5.3 mg/dl b) 21.5 +or- 6.1 mg/dl c) 21.6 +or- 6.1 mg/dl d) 18.9 +or- 6.0 mg/dl e) Not given	a) 3 325-mg enteric-coated tablets 4x/day b) 2 650-mg enteric-coated tablets 3x/day c) 3 650-mg enteric-coated tablets 3x/day d) 2 975-mg enteric-coated tablets 3x/day e) Controls, 6 325-mg plain tablets 3x/day, estimated from graph Range of mean steady-state hourly levels between 0800 and 1900 hr. No significant differences 20-63 yr olds with rheumatoid arthritis, mean wt 61-68 kg, and healthy controls, mean wt 74.8 kg, Canada CANADA; RHEUMATOID ARTHRITIS; BLOOD; ANALGESICS; ANTIPYRETICS; DRUG THERAPY; HUMAN	Kaystone, E.C. Paton, T.W. Littlejohn, G. Verdejo, A. Piper, S. Wright, L.A. Goldsmith, C.H. 1981 Journal of the Canadian Medical Association 127:383-386
0498 Blood, plasma	Ingestion	HPLC	12	a) 36.3-186 ug/ml b) Not given	a) 63.3 +or- 5.4 ug/ml b) 150 ug/ml S.E.	a) Peak salicylic acid (metabolite) 2.5 hr after 1300 mg 12 subjects fasted overnight b) Peak salicylic acid after 1300 mg 3X/day for 9 days, 4 subjects, estimated from graph Healthy, 21-45 yr olds METABOLISM; MEDICATION; DRUGS; BLOOD PLASMA; URINE; ADULTS; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTIPYRETICS	Harrison, L.I. Funk, H.L. Osvaldo, H.H. Ober, R.E. 1981 Journal of Clinical Pharmacology 21:481-484

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Salicylic acid acetate (8 CI)
Benzoic acid, 2-(acetyloxy)- (9 CI)
50-78-2
C9-88-04
MP 188.2, MP 135 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8489 Blood, plasma	Ingestion	CC	a) 6 b) 6 c) 6	a) 78-1 umol/l b) 588-4 umol/l c) 35-2 umol/l d) 488-7 umol/l e) 9-2 umol/l f) 10-488 umol/l	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 30 min and 2 hr after 1 g as effervescent formulation, 55 umol/l at 15 min b) Salicylic acid, with a), 1 and 15 hr, 200 umol/l at 30 min c) 1 and 3 hr after 1 g as plain formulation, 30 umol/l at 30 min d) Salicylic acid, with c), 2 and 15 hr, 50 umol/l at 30 min e) 1 and 3 hr after 1 g as sustained release capsules, 3 umol/l at 15 min f) Salicylic acid, with e), 30 min and 4 hr, 12 umol/l at 24 hr Range of means estimated from graph Healthy 24-48 yr olds, wt 57-85 kg ADULTS; BLOOD PLASMA; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTIPYRETICS; DRUGS; COMPARATIVE EVALUATIONS	Peterson, P. Husted, S.E. Pedersen, A.K. Godey, B. 1982 Acta Pharmacologica et Toxicologica 51:285-291
8500 Blood, plasma	Ingestion	HPLC	6	a) Not given b) Not given c) Not given d) Not given	a) 26.1 +or- 15.8 umol/l b) 41.1 +or- 25.6 umol/l c) 52.8 +or- 20.6 umol/l d) 78.9 +or- 55.5 umol/l	a) 0.94 +or- 0.57 hr after 650 mg Bi-prin b) 0.93 +or- 0.61 hr after 600 mg compressed aspirin c) 0.69 +or- 0.23 hr after 650 mg Bufferin d) 0.45 +or- 0.20 hr after 650 mg Asproclear Peaks Normal 20-42 yr olds Inhibition of platelet aggregation, all preparations AUSTRALIA; ADULTS; BLOOD PLASMA; ANTICOAGULANTS; COMPARATIVE EVALUATIONS; DRUGS	Siebert, D.J. Bochner, F. Imhoff, D.M. Watts, E. Lloyd, J.V. Field, J. Gabb, B.W. 1983 Clinical Pharmacology and Therapeutics 33(3):367-374

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Salicylic acid acetate (8 CI)
Benzoic acid, 2-(acetyloxy)- (9 CI)
50-78-2
C9-H8-O4
MW 180.2, MP 135 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8581 Urine	Ingestion	TLC HPLC NS	4	a) 94.4-98.4% b) 0.9-1.5% c) 0.6-22.1% d) 56.2-60.5% e) None detected-2.7% f) 2.3-5.6% g) 2.1-7.9% h) 4.3-8.5% i) 92.5-98.4% % of dose	a) 96.2% b) Not given c) 13.5% d) 63.5% e) 1.3% f) 4.0% g) 5.9% h) 6.2% i) 94.8% % of dose	a) 0.24 hr after 1.0 g aspirin and 10 uCi (carboxyl-C-14)aspirin b) 24-48 hr c) Salicylic acid (metabolite), 0-24 hr d) Salicyluric acid (metabolite), 0-24 hr e) Gentisic acid (metabolite), 0-24 hr f) Salicylacylglucuronide (metabolite), 0-24 hr g) Salicylphenolic glucuronide (metabolite), 0-24 hr h) Salicyluricphenolic glucuronide (metabolite), 0-24 hr i) Total metabolites, 0-24 hr 23-47 yr olds URINE; ANALGESICS; ANTIPYRETICS; DRUGS; METABOLISM; METABOLITES	Hutt, A.J. Caldwell, J. Smith, R.L. 1982 Xenobiotica 12(10):601-610

Salicylic acid, ion(1-) (8 CI)
Benzoic acid, 2-hydroxy-, ion(1-) (9 CI) (VAN)
63-26-5
C7-H5-O3
MW 138.12, MP 157-159 C, BP about 211 C at 20 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8582 Blood	Ingestion		1	Not applicable	96 mg/l	Suicide victim, unknown dose pyrilamine (blood level 11 mg/l) 25 yr old, wt 56 kg CALIFORNIA; SUICIDE; BLOOD; BRAIN; LIVER; DRUG ABUSE; DRUGS; FORENSIC MEDICINE	Johnson, G.R. 1981 Clinical Toxicology 18(8):987-996

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Salicylic acid, ion(1-) (8 CI)
Benzoic acid, 2-hydroxy-, ion(1-) (8 CI) (VAN)
53-36-5
C7-H5-O3
MW 138.12, MP 157-159 C, BP about 211 C at 20 mm Hg

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8503 Blood	Ingestion Normal	Radiometry	6	a) Not given b) Not given c) Not given d) Not given	a) 18.27 +or- 1.84 ug/ml b) 0.03 +or- 0.00 ug/ml c) 18.33 +or- 1.06 ug/ml d) 0.00 +or- 0.01 ug/ml	a) 1 hr after 2.77 mM, oral b) 1 hr after 3.40 mM, topical cream c) 2 hr after 2.77 mM, oral d) 2 hr after 3.40 mM topical cream 55-62 yr old rheumatoid arthritis patients ADULTS; BONE DISEASES; BLOOD; SYNOVIAL FLUID; URINE; ANALGESICS; DRUGS	Rabinowitz, J.L. Feldman, S.S. Weinberger, A. Schumacher, H.R. 1982 Journal of Clinical Pharmacology 22:42-48
8504 Blood, plasma	Ingestion		1	a) Not applicable b) Not applicable	a) 83 mg/dl b) 20 mg/dl	a) 33 g ingested 24 hr before admission b) After 2% acrylic hydrogel-coated charcoal hemoperfusion and forced alkaline diuresis Estimated from graph 41 yr old SUICIDE; BLOOD PLASMA; ANALGESICS; ANTIPYRETICS; DRUG ABUSE; DRUGS; HEMODIALYSIS; REVIEW	Winchester, J.F. Golfand, M.C. Halliwell, M. Valo, J.A. Goulding, R. Schreiner, G.E. 1981 Archives of Internal Medicine 141:370-374
8505 Blood, plasma	Ingestion	HPLC	a) 16 b) 16 c) 6 d) 6	a) 320-230 mg/l b) 467-150 mg/l c) 463-240 mg/l d) 439-180 mg/l	a) Not given b) Not given c) Not given d) Not given	a) Controls, oral fluids only b) Forced alkaline diuresis c) Forced diuresis without sodium bicarbonate d) Alkali (sodium bicarbonate) without diuresis Level at admission and 16 hr later Treatment in b),c),d) by 3-4 hr IV. Range of means, 16 hr data estimated from graph 16-65 yr olds, aspirin overdosage BLOOD PLASMA; URINE; ANALGESICS; ANTIPYRETICS; DRUGS; COMPARATIVE EVALUATIONS	Prescott, L.F. Balali-Mood, M. Critchley, J.A.J.H. Johnstone, A.F. Proudfoot, A.T. 1982 British Medical Journal 285:1383-1386

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Salicylic acid, ion(1-) (8 CI)
Benzoic acid, 2-hydroxy-, ion(1-) (9 CI) (VAN)
63-36-5
C7-H5-O3
MW 130.12, MP 157-159 C, BP about 211 C at 20 mm Hg

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8506 Blood, serum	Ingestion		104	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 56 mg/100 ml b) 53 mg/100 ml c) 56 mg/100 ml d) 47 mg/100 ml e) 76 mg/100 ml f) 65 mg/100 ml	a) Acute poisoning, mild symptoms b) Chronic poisoning, mild symptoms c) Acute poisoning, moderate symptoms d) Chronic poisoning, moderate symptoms e) Acute poisoning, severe symptoms f) Chronic poisoning, severe symptoms 87% with severe reactions were chronically exposed. <1 to 18 yr olds, drug self inflicted or given therapeutically. Hyperventilation, nausea and/or vomiting, dehydration, lethargy/disorientation, coma and/or seizures were major clinical symptoms. MASSACHUSETTS; CHILDREN; UTAH; BLOOD SERUM; ANALGESICS; DRUG ABUSE; DRUG THERAPY; DRUGS	Gaudreault, P. Temple, A.R. Lovejoy, F.H. 1982 Pediatrics 70(4):566-569
8507 Blood, serum	Ingestion	Chem	8	93-163 ug/ml	141.6 ug/ml	Trough level after 1.0 mg digoxin IV for 10 min. 975 mg aspirin 3X/day for 3 days before, 5 days after digoxin Healthy 24-53 yr olds No significant effect of aspirin on digoxin kinetics or on creatinine clearance ADULTS; BLOOD SERUM; DRUG INTERACTION; COMPARATIVE EVALUATIONS	Fenster, P.E. Conoso, E.A. Hanson, C.D. Finley, P.R. 1982 Clinical Pharmacology and Therapeutics 32(4):428-430
8508 Milk						Review. General pharmacological principles associated with excretion of drugs and chemicals in human milk. PENNSYLVANIA; UNITED STATES; ADULTS; INFANTS; MILK; SALIVA; URINE; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTICOAGULANTS; ANTIPYRETICS; DIURETICS; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; CAFFEINE; NICOTINE; PESTICIDES; SODIUM; THEOPHYLLINES; ALCOHOLIC BEVERAGES; LACTATION; METABOLISM; METABOLITES; TOBACCOS	Berlin, C.M., Jr. 1981 Obstetrics and Gynecology 58(5)(supplement):178-2 38

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Salicylic acid, ion(1-) (8 CI)
Benzoic acid, 2-hydroxy-, ion(1-) (9 CI) (VAN)
69-36-5
C7-H5-03
MW 138.12, MP 157-159 C, BP about 211 C at 20 mm Hg

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8509 Synovial fluid	Ingestion Dermal	Radiometry	6	a) Not given b) Not given c) Not given d) Not given	a) 0.29 +or- 0.03 ug/ml b) 0.16 +or- 0.02 ug/ml c) 0.40 +or- 0.08 ug/ml d) 0.25 +or- 0.04 ug/ml	a) 1 hr after 2.77 mM, oral b) 1 hr after 3.48 mM, topical cream c) 2 hr after 2.77 mM, oral d) 2 hr after 3.48 mM topical cream 55-62 yr old rheumatoid arthritis patients ADULTS; BONE DISEASES; BLOOD; SYNOVIAL FLUID; URINE; ANALGESICS; DRUGS	Rabinowitz, J.L. Feldman, H.S. Weinberger, A. Schumacher, H.R. 1982 Journal of Clinical Pharmacology 22:42-48
8510 Urine	Ingestion		1	Not applicable	290 mg/24 hr	33 g ingested 24 hr before admission Charcoal absorption during 6 hr hemoperfusion, 2,890 mg 41 yr old SUICIDE; BLOOD PLASMA; ANALGESICS; ANTIPYRETICS; DRUG ABUSE; DRUGS; HEMODIALYSIS; REVIEW	Winchester, J.F. Golfand, M.C. Bellwell, M. Vale, J.A. Goulding, R. Schreiner, G.E. 1981 Archives of Internal Medicine 141:370-374
8511 Urine	Ingestion	HPLC	a) 16 b) 16 c) 6 d) 6	a) Not given b) Not given c) Not given d) Not given	a) 0.38 +or- 0.32 g b) 3.60 +or- 0.94 g c) 1.53 +or- 1.27 g d) 3.87 +or- 1.28 g	a) Control, oral fluids only b) Forced alkaine diuresis c) Forced diuresis without sodium bicarbonate d) Alkali (sodium bicarbonate) without diuresis Level 16 hr after admission. Treatment in b),c),d) by 3-4 hr IV. 16-65 yr olds, aspirin overdosage BLOOD PLASMA; URINE; ANALGESICS; ANTIPYRETICS; DRUGS; COMPARATIVE EVALUATIONS	Prescott, L.F. Balali-Mood, M. Critchley, J.A.J.H. Johnstone, A.F. Proudfoot, A.T. 1982 British Medical Journal 285:1383-1386
8512 Urine	Ingestion Dermal	Radiometry	6	a) Not given b) Not given c) Not given d) Not given	a) 0.64 +or- 0.13 ug/ml b) 0.02 +or- 0.01 ug/ml c) 1.45 +or- 0.27 ug/ml d) 0.18 +or- 0.06 ug/ml	a) 1 hr after 2.77 mM, oral b) 1 hr after 3.48 mM, topical cream c) 2 hr after 2.77 mM, oral d) 2 hr after 3.48 mM topical cream 55-62 yr old rheumatoid arthritis patients ADULTS; BONE DISEASES; BLOOD; SYNOVIAL FLUID; URINE; ANALGESICS; DRUGS	Rabinowitz, J.L. Feldman, H.S. Weinberger, A. Schumacher, H.R. 1982 Journal of Clinical Pharmacology 22:42-48

Salicylic acid, 5-((p-(2-pyridylsulfamoyl)phenyl)azo)- (8 CI)
Benzoic acid, 2-hydroxy-5-((4-((2-pyridinylamino)sulfonyl)phenyl)azo)- (9 CI)
599-79-1
C18-H14-N4-O5-S
MW 398.39, MP 240-245 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0513 Urine						Review. General pharmacological principles associated with excretion of drugs and chemicals in human milk. PENNSYLVANIA; UNITED STATES; ADULTS; INFANTS; MILK; SALIVA; URINE; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTICOAGULANTS; ANTIPYRETICS; DIURETICS; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; CAFFEINE; NICOTINE; PESTICIDES; SODIUM; THEOPHYLLINES; ALCOHOLIC BEVERAGES; LACTATION; METABOLISM; METABOLITES; TOBACCOS	Berlin, C.H., Jr. 1981 Obstetrics and Gynecology 58(5)(supplement):17S-23S

Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0514 Blood, cells	Ingestion	Fluorometry	16	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 102 +or- 17 ng/ml b) 114 +or- 20 ng/ml c) 120 +or- 9 ng/ml d) 77 +or- 18 ng/ml e) 106 +or- 19 ng/ml f) 210 +or- 66 ng/ml g) 89 +or- 6 ng/ml h) 99 +or- 12 ng/ml	a) Before treatment, 7 subjects b) After 4 wk, 90 ug/day as Na selenite c) After 17 wk d) Before treatment, 4 subjects e) After 4 wk, 100 ug/day as DL-selenomethionine f) After 17 wk g) Before treatment, 4 subjects h) After 4 wk, 500 ug/day as Na selenite Healthy 21-62 yr olds, Dunedin, New Zealand NEW ZEALAND; ADULTS; NUTRITIONAL DEFICIENCIES; BLOOD; BLOOD PLASMA; ERYTHROCYTES; HEMERALS; SELENIUM; ENZYMES; DRUGS	Thompson, C.D. Robinson, M.F. Campbell, D.R. Rea, H.M. 1982 American Journal of Clinical Nutrition 36:26-31

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Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8515 Blood, plasma	Ingestion	Fluorometry	16	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 67 +or- 12 ng/ml b) 93 +or- 9 ng/ml c) 103 +or- 11 ng/ml d) 52 +or- 14 ng/ml e) 114 +or- 6 ng/ml f) 154 +or- 14 ng/ml g) 48 +or- 9 ng/ml h) 98 +or- 17 ng/ml	a) Before treatment, 7 subjects b) After 4 wk, 90 ug/day as Na selenite c) After 17 wk d) Before treatment, 4 subjects e) After 4 wk, 100 ug/day as DL-selenomethionine f) After 17 wk g) Before treatment, 4 subjects h) After 4 wk, 500 ug/day as Na selenite Healthy 21-62 yr olds, Dunedin, New Zealand NEW ZEALAND; ADULTS; NUTRITIONAL DEFICIENCIES; BLOOD; BLOOD PLASMA; ERYTHROCYTES; MINERALS; SELENIUM; ENZYMES; DRUGS	Thompson, C.D. Robinson, M.F. Campbell, D.R. Rea, H.M. 1982 American Journal of Clinical Nutrition 36:28-31
8516 Blood, whole	Ingestion	Fluorometry	39	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not applicable l) Not applicable	a) 84 +or- 15 ng/ml b) 193 +or- 12 ng/ml c) 116 +or- 10 ng/ml d) 63 +or- 16 ng/ml e) 114 +or- 9 ng/ml f) 187 +or- 30 ng/ml g) 78 +or- 11 ng/ml h) 185 +or- 10 ng/ml i) 121 +or- 19 ng/ml j) 94 +or- 12 ng/ml k) 174 ng/ml l) 186 ng/ml	a) Before treatment, 7 subjects b) After 4 wk, 90 ug/day as Na selenite c) After 17 wk d) Before treatment, 4 subjects e) After 4 wk, 100 ug/day as DL-selenomethionine f) After 17 wk g) Before treatment, 4 subjects h) After 4 wk, 500 ug/day as Na selenite i) After 0.5-15 yr of 1-3 mg Se taken 1-2X/wk, 9 subjects k) Dose 0.46 mg Na selenite/day for 3 yr, elderly male l) Dose 0.37 mg Na selenite/day for 3 yr, elderly female Significantly different, i) and j), ($p < 0.01$). Correlation between glutathione peroxidase activity and blood Se ($p < 0.001$) in i)-l). Healthy 21-62 yr olds in a)-h), Dunedin, and 49->60 yr old residents of Christchurch and Hamilton who regularly ingest Se supplements, New Zealand NEW ZEALAND; ADULTS; NUTRITIONAL DEFICIENCIES; BLOOD; BLOOD PLASMA; ERYTHROCYTES; MINERALS; SELENIUM; ENZYMES; DRUGS	Thompson, C.D. Robinson, M.F. Campbell, D.R. Rea, H.M. 1982 American Journal of Clinical Nutrition 36:28-31

Solanid-5-en-3-ol, (3beta)-
80-78-4
C27-H43-N-O
MW 397.62, MP 218-219 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0517 Blood, cells	Injection	Radiometry	3	a) 8.8-13.9% of dose b) 1.8-1.7% of dose	a) Not given b) Not given	a) 7 min b) 24 hr Total radioactivity after IV doses of H-3 solanidine Erythrocytes contained 2-5 times more radioactivity than plasma Healthy subjects AUTOPSIES; BLOOD PLASMA; ERYTHROCYTES; LIVER; URINE; ALKALOIDS; FOODS; HEALTH HAZARDS; RADIOISOTOPES	Claringbold, W.D.B. Poe, J.D. Renwick, J.H. 1982 Xenobiotica 12(5):293-302
0518 Blood, plasma	Injection	Radiometry	3	a) 2.8-3.7% of dose b) 0.6-3.7% of dose	Not given Not given	a) 7 min b) 24 hr Total radioactivity after IV doses of H-3 solanidine Erythrocytes contained 2-5 times more radioactivity than plasma Healthy subjects AUTOPSIES; BLOOD PLASMA; ERYTHROCYTES; LIVER; URINE; ALKALOIDS; FOODS; HEALTH HAZARDS; RADIOISOTOPES	Claringbold, W.D.B. Poe, J.D. Renwick, J.H. 1982 Xenobiotica 12(5):293-302
0519 Liver		TLC	3	a) 0-21 ug/g b) 10-60 ug/g c) 10-17 ug/g d) 16-64 ug/g	a) Not given b) Not given c) Not given d) Not given	a) Free solanidine b) Solanidine glucuronide c) Solanidine glycoside d) Acid-hydrolysed fraction Solanidine equivalents in post mortem samples. 2 other samples had 0 levels. Cardiovascular disease victims AUTOPSIES; BLOOD PLASMA; ERYTHROCYTES; LIVER; URINE; ALKALOIDS; FOODS; HEALTH HAZARDS; RADIOISOTOPES	Claringbold, W.D.B. Poe, J.D. Renwick, J.H. 1982 Xenobiotica 12(5):293-302
0520 Urine	Injection	Radiometry	3	1.15-4.71% of dose	Not given	24 hr excretion of radioactivity (H-3 solanidine). Fecal levels 1.76-3.97% of dose Healthy subjects AUTOPSIES; BLOOD PLASMA; ERYTHROCYTES; LIVER; URINE; ALKALOIDS; FOODS; HEALTH HAZARDS; RADIOISOTOPES	Claringbold, W.D.B. Poe, J.D. Renwick, J.H. 1982 Xenobiotica 12(5):293-302

Sparteine (8 CI)
7,14-Methano-2H,6H-dipyrido(1,2-a:1',2'-e)(1,5)diazocine, dodecahydro-, (7S-(7alpha,7aalpha,14alpha,14abeta))- (9 CI)
90-39-1
C15-H26-N2
MW 234.37, BP 173 C at 8 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8521 Urine	Ingestion	GC	48	29.7-75.8% of dose	57.0 +or- 10.6% of dose	24 hr mean recovery of drug and metabolites after 100 mg, as sulfate (equivalent to 55.4 mg free base). Data also for 3 groups with genetic differences in metabolism of sparteine. Caucasians, Canada CANADA; URINE; ANTIARRHYTHMIC AGENTS; DRUGS; COMPARATIVE EVALUATIONS; GENETIC EFFECTS; METABOLISM; METABOLITES	Vinks, A. Inaba, T. Otton, S.V. Kalow, W. 1982 Clinical Pharmacology and Therapeutics 31(1):23-29

Streptamine, O-3-amino-3-deoxy-alpha-D-glucopyranosyl-(1-4)-O-(2,6-diamino-2,3,6-trideoxy-alpha-D-ribo-hexopyranosyl-(1-6))-2-deoxy-, D- (8 CI)
D-Streptamine, O-3-amino-3-deoxy-alpha-D-glucopyranosyl-(1-6)-O-(2,6-diamino-2,3,6-trideoxy-alpha-D-ribo-hexopyranosyl-(1-4))-2-deoxy- (9 CI)
32986-56-4
C18-H37-N5-O9
MW 467.54

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8522 Blood, serum	Injection	RIA	12	a) 1.3-11.1 ug/ml b) 6.0-10.5 ug/ml	a) Not given b) Not given	a) Range of peaks after 5th 1 hr IV of 0.65-3.44 mg/kg every 6 hr. All troughs <1 ug/ml. 12 cases, 17 courses of therapy b) Range of peaks 24-48 hr after dose adjustment to achieve peak levels of 8 ug/ml and troughs of 1 ug/ml. No trough >or= 2 ug/ml. 11 cases, 12 courses of therapy. 3-25 yr old cystic fibrosis patients, wt 17.7-58.2 kg, NM Loss of appetite, decreased exercise tolerance, increased sputum production, fever, dyspnea, weight loss, and increased infiltrates in chest radiograph. Improved during 2-3 wk therapy. CYSTIC FIBROSIS; NEW MEXICO; ADOLESCENTS; ADULTS; CHILDREN; DISEASES; BLOOD SERUM; ANTIBIOTICS; DRUG THERAPY; DRUGS	Kelly, H.B. Menendez, R. Fan, L. Murphy, S. 1982 Journal of Pediatrics 100(2):318-321

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Streptamine, O-3-amino-3-deoxy-alpha-D-glucopyranosyl-(1-4)-O-(2,6-diamino-2,3,6-trideoxy-alpha-D-ribo-hexopyranosyl-(1-6))-2-deoxy-, D- (8 CI)
D-Streptamine, O-3-amino-3-deoxy-alpha-D-glucopyranosyl-(1-6)-O-(2,6-diamino-2,3,6-trideoxy-alpha-D-ribo-hexopyranosyl-(1-4))-2-deoxy- (9 CI)
32986-56-4
C10-H37-N5-O9
MW 467.54

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8523 Eye	Injection	RIA	23	1.78-0.9 ug/ml	Not given	a) Aqueous humor 2 and 8 hr after 10 mg. Initial measurement 1.9 ug/ml at 0.5 hr Estimated from graph Cataract patients with no contraindication for use of aminoglycoside, age 51-89 yr AMINOGLYCOSIDE; AQUEOUS HUMOR; CATARACTS; EYE; ANTIBIOTICS; SURGERY; ADULTS	Gordon, T.B. Cunningham, R.D. 1982 American Journal of Ophthalmology 93(1):107-110

Strychnine (8 CI)
Strychnidin-10-one (9 CI)
57-24-9
C21-H22-N2-O2
MW 334.40, MP 268-290 C, BP 270 C at 5 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8524 Blood	Injection	TLC GC UV	1	Not applicable	11.0 mg/l	Autopsy 20 yr old Anglo former cocaine user Convulsions, difficult breathing, death TEXAS; CASE HISTORIES; BLOOD; KIDNEYS; DRUG ABUSE; DRUGS; FORENSIC MEDICINE	Decker, W.J. Baker, H.E. Tamulinas, S.E. Kornderffer, W.E. 1982 Veterinary and Human Toxicology 24(3):161-162
8525 Kidney	Injection	TLC GC UV	1	Not applicable	1.3 mg/kg	Autopsy. 10 yr old Latin-American drug abuser TEXAS; CASE HISTORIES; BLOOD; KIDNEYS; DRUG ABUSE; DRUGS; FORENSIC MEDICINE	Decker, W.J. Baker, H.E. Tamulinas, S.E. Kornderffer, W.E. 1982 Veterinary and Human Toxicology 24(3):161-162

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Strychnine (8 CI)
Strychnidin-10-one (9 CI)
57-24-9
C21-H22-N2-O2
MW 334.40, MP 268-290 C, BP 270 C at 5 mm Hg

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0526 Urine	Ingestion	HPLC	1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) 18.9 ug/24 hr b) 29.3 ug/24 hr c) 26.3 ug/24 hr d) 116.3 ug/24 hr e) 335.0 ug/24 hr f) 1475.0 ug/24 hr	a) 6 mo old, wt 7.5 kg, 1.2 mg/day b) 7 mo old, wt 7.0 kg, 3.2 mg/day c) 7 mo old, wt 8 kg, 1.0 mg/day d) 8 mo old, wt 8.3 kg, 3.0 mg/day e) 3 yr old, wt 11.5 kg, 12.0 mg/day f) 3.5 yr old, wt 12.1 kg, 12.0 mg/day Patient with nonkatotic hyperglycinemia treated with daily strychnine nitrate for 3 yr CHILDREN; ANEMIA; URINE; DRUG THERAPY; DRUGS; STIMULANTS; MEASUREMENT METHODS; METABOLISM	Egloff, T. Hindervieser, A. Pfister, E. Otten, A. Steinmann, B. Steiner, W. Gitzelmann, R. 1982 Journal of Clinical Chemistry and Clinical Biochemistry 20(4):203-206

Sulfanilamide, N(1)-(4,6-dimethyl-2-pyrimidinyl)- (8 CI)
Benzenesulfonamide, 4-amino-N-(4,6-dimethyl-2-pyrimidinyl)- (9 CI)
57-68-1
C12-H14-N4-O2-S
MW 278.32, MP 176 C (also reported: 178-179 C, 198-199 C, 205-207 C)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0527 Blood, plasma	Ingestion		16	a) 64.03-80.42 ug/ml b) 38.82-64.12 ug/ml	a) Not given b) Not given	a) Peaks, 3 hr after 1.5 gm. Slow acetylators, glucose-6-phosphate dehydrogenase (G-6-PD) deficient b) Peaks, 3 hr after 1.5 gm. Rapid acetylators, G-6-PD normal Healthy subjects and controls, Ghana. GHANA; ADULTS; BLOOD PLASMA	Woolhouse, N.M. Atu-Taylor, L.C. 1982 Journal of Clinical Pharmacology and Therapeutics 30(3):377-383

Theobromine (8 CI)
1H-Purine-2,6-dione, 3,7-dihydro-3,7-dimethyl- (9 CI)
83-67-0
C7-H8-N4-O2
MW 180.17, MP 357 C, BP 290 C (sublimes)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8528 Milk						Review. General pharmacological principles associated with excretion of drugs and chemicals in human milk. PENNSYLVANIA; UNITED STATES; ADULTS; INFANTS; MILK; SALIVA; URINE; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTICOAGULANTS; ANTIPYRETICS; DIURETICS; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; CAFFEINE; NICOTINE; PESTICIDES; SODIUM; THEOPHYLLINES; ALCOHOLIC BEVERAGES; LACTATION; METABOLISM; METABOLITES; TOBACCOS	Berlin, C.H., Jr. 1981 Obstetrics and Gynecology 58(5)(supplement):17S-23S
8529 Urine						Review. General pharmacological principles associated with excretion of drugs and chemicals in human milk. PENNSYLVANIA; UNITED STATES; ADULTS; INFANTS; MILK; SALIVA; URINE; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTICOAGULANTS; ANTIPYRETICS; DIURETICS; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; CAFFEINE; NICOTINE; PESTICIDES; SODIUM; THEOPHYLLINES; ALCOHOLIC BEVERAGES; LACTATION; METABOLISM; METABOLITES; TOBACCOS	Berlin, C.H., Jr. 1981 Obstetrics and Gynecology 58(5)(supplement):17S-23S
8530 Urine	Ingestion	HPLC	4	a) Not given b) Not given	a) 90.8 +or- 1.6% b) 92.6 +or- 3.1% % of dose S.E.	a) Theobromine alone b) Drug plus allopurinol (100 mg/8 hr, 7 days) Excreted within 8 hr after 200 mg every 8 hr for 4 days. No significant differences. Healthy 22-32 yr old men, South Australia AUSTRALIA; ADULTS; URINE; DIURETICS; DRUGS; STIMULANTS;	Hiners, J.O. Attwood, J. Birkett, D.J. 1982 Drug Metabolism and Disposition 10(6):672-675

Theophylline (8 CI)
1H-Purine-2,6-dione, 3,7-dihydro-1,3-dimethyl- (9 CI)
58-55-9
C7-H8-N4-O2
MP 180.17, MP 270-274 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
6531 Blood	Ingestion		1	Not applicable	106 mg/l	Suicide victim at postmortem, detected 30 partially dissolved tablets aminophylline. 53 yr old Tachycardia, leucocytosis, hypokalemia, metabolic acidosis, hyperglycemic, glycosuria, high serum amylase activity, coronary atherosclerosis, pulmonary edema. ADULTS; CASE HISTORIES; SUICIDE; BLOOD; LIVER; DRUG ABUSE; DRUGS; MUSCLE RELAXANTS; THEOPHYLLINES	Burgan, T.H.S. Gupta, I. Date, C.H. 1982 British Medical Journal 284:939-940
6532 Blood, plasma	Ingestion	HPLC	a) 31 b) 15 c) 8 d) 8	a) 15.9-8.6 mg/l b) 22.7-7.6 mg/l c) 18.4-6.8 mg/l d) 16.9-6.7 mg/l	a) Not given b) Not given c) Not given d) Not given	a) 5 and 16 hr after dose. Level 18.1 mg/l at 1 hr. Bronchial asthma patients, no antibiotic b) 3 and 16 hr after dose. Level 15.0 mg/l at 1 hr. Bronchial asthma patients, erythromycin ethylsuccinate 1.98 +or- 0.05 g/day for mean of 8.3 +or- 1.0 days c) 3 and 16 hr after dose. Level 13.9 mg/l at 1 hr. Patients with chronic airflow obstruction, no antibiotic d) 4 and 16 hr after dose. Level 9.3 mg/l at 1 hr. Patients with chronic airflow obstruction, erythromycin ethylsuccinate, 2.14 +or- 0.14 g/day for mean of 5.5 +or- 1.0 days Dose 600 mg. Range of means 48.1-64.7 yr olds (means), wt 57.9-64.7 kg ADULTS; RESPIRATORY DISEASES; BLOOD PLASMA; ANTIBIOTICS; DRUGS; MUSCLE RELAXANTS; VASODILATORS; ERYTHROMYCINS; THEOPHYLLINES	Richar, C. Mathieu, M. Sah, H. Thuilles, C. Dureux, P. Giudicelli, J.-F. 1982 Clinical Pharmacology and Therapeutics 31(5):578-586

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Theophylline (8 CI)
1H-Purine-2,6-dione, 3,7-dihydro-1,3-dimethyl- (9 CI)
58-55-9
C7-H8-N4-O2
MW 180.17, MP 270-274 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8533 Blood, serum	Ingestion	HPLC	8	a) Not given b) Not given	a) 6.5 mg/l b) 6.9 mg/l	a) Peak, 2.1 hr after 2 250 mg tablets microcrystalline theophylline (unolin), AUC 76.2 mg.hr/l b) Peak, 1.9 hr after 300 mg theophyllamine (theodrex), equivalent to 322 mg theophylline, AUC 75.7 mg.hr/l Peaks and AUC calculated (dose-corrected) for 250 mg dose theophylline. No significant difference 24-37 yr olds, wt 67-104 kg ADULTS; BLOOD SERUM; DRUGS; MUSCLE RELAXANTS; THEOPHYLLINES	Arnold, J. Bekhe, O.H. 1979 Lancet 1(8117):667-668
8534 Blood, serum	Ingestion	HPLC	6	a) 1.5-9.8 mg/l b) 0.5-9.1 mg/l c) 0.5-8.0 mg/l d) 0.75-7.0 mg/l	a) Not given b) Not given c) Not given d) Not given	a) 0.5 and 4 hr after six 100 mg Theo-dur tablets, with fasting. Final measurement 2.1 mg/l at 24 hr b) 0.5 and 8 hr after six 100 mg Theodur tablets plus 440 cal breakfast. Final measurement 2.8 mg/l at 24 hr c) 0.5 and 6 hr after two 300 mg Theo-dur tablets, with fasting. Final measurement 1.0 mg/l at 24 hr d) 0.5 and 8 hr after two 300 mg Theo-dur tablets plus 440 cal breakfast. Final measurement 3.0 mg/l at 24 hr Range of means, estimated from graph Healthy, caucasoe (wt >40 kg) adults BIOAVAILABILITY; FOODS; COMPARATIVE EVALUATIONS; BLOOD SERUM; DRUGS; ADULTS; THEOPHYLLINES; DRUGS	Londe, N.H. Gal, P. Purohit, A.A. Walter, J.B. 1982 Journal of Clinical Pharmacology 22:196-200

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Theophylline (8 CI)
1H-Purine-2,6-dione, 3,7-dihydro-1,3-dimethyl- (9 CI)
58-55-9
CT-80-00-02
MW 180.17, MP 270-274 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0535 Blood, serum						Review. Assessment of clinical use of laboratory determinations for metals, anticonvulsive agents, and cardiovascular drugs. ADULTS; AGE; CHILDREN; ANEMIA; BONE DISEASES; DISEASES; MENTAL DEGRADATION; MENTAL POISONING; NUTRITIONAL DEFICIENCIES; SKIN DISEASES; BLOOD; BLOOD PLASMA; BLOOD SERUM; LIVER; URINE; ANTIARRHYTHMIC AGENTS; ANTICONVULSANTS; DIURETICS; DRUG THERAPY; DRUGS; ETHOTOIN; MUSCLE RELAXANTS; SEDATIVES; TRANQUILIZERS; REVIEW; COPPER; DIAZEPAM; IRON; LEAD; LITHIUM; THEOPHYLLINES; ZINC; PAINTS	Weiss, H.B. Rosenthal, I.M. 1978 Journal of Analytical Toxicology 2:168-171
0536 Blood, serum	Ingestion		1	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 60 mg/l b) 33 mg/l c) 21 mg/l d) 15 mg/l e) 34 mg/l	a) 4 hr after sustained-release aminophylline, unknown dose b) After 3-hr extracorporeal hemoperfusion through charcoal column c) 10 hr after the hemoperfusion d) After 2nd 3-hr extracorporeal hemoperfusion through charcoal column e) 14 hr after the hemoperfusion Drug undetectable after 80 hr 26 yr old Nausea, vomiting, sinus tachycardia 150/min, blood pressure 100/60 mm Hg BLOOD SERUM; DRUG ABUSE; DRUGS; SUICIDE; THEOPHYLLINES	McConnell, J.M. McGeachie, J.F. Knapil, J. Thomson, A. Junor, B. 1982 British Medical Journal 284:943
0537 Liver	Ingestion		1	Not applicable	188 mg/l	Suicide victim at postmortem, detected 30 partially dissolved tablets aminophylline. 53 yr old Tachycardia, leucocytosis, hypokalemia, metabolic acidosis, hyperglycemia, glycosuria, high serum amylase activity, coronary atherosclerosis, pulmonary edema. ADULTS; CASE HISTORIES; SUICIDE; BLOOD; LIVER; DRUG ABUSE; DRUGS; MUSCLE RELAXANTS; THEOPHYLLINES	Burgan, T.H.S. Gupta, I. Bate, C.M. 1982 British Medical Journal 284:939-940

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Theophylline (8 CI)
1H-Purine-2,6-dione, 3,7-dihydro-1,3-dimethyl- (9 CI)
58-55-9
C7-H8-N4-O2
MW 180.17, MP 270-274 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8538 Milk						Review. General pharmacological principles associated with excretion of drugs and chemicals in human milk. PENNSYLVANIA; UNITED STATES; ADULTS; INFANTS; MILK; SALIVA; URINE; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTICOAGULANTS; ANTIPYRETICS; DIURETICS; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; CAFFEINE; NICOTINE; PESTICIDES; SODIUM; THEOPHYLLINES; ALCOHOLIC BEVERAGES; LACTATION; METABOLISM; METABOLITES; TOBACCOS	Berlin, C.M., Jr. 1981 Obstetrics and Gynecology 58(5)(supplement):176-238
8539 Urine	Ingestion	HPLC	7	a) 4.3-15% b) 26.8-76.6% c) 13.9-51.5% d) 6.5-21.7% e) 8.1-52.6% f) 39.1-71.3% g) 20.5-43.6% h) 5.8-16.9% % of dose	a) 9.3 +or- 3.5% b) 51.9 +or- 15.2% c) 27.3 +or- 13.2% d) 13.0 +or- 5.5% e) 16.3 +or- 16.2% f) 59.6 +or- 13.0% g) 31.6 +or- 9.5% h) 11.9 +or- 3.5% % of dose	a) Theophylline b) 1,3-Dimethyluric acid (metabolite) c) 1-Methyluric acid (metabolite) d) 3-Methylxanthine (metabolite) e) Theophylline f) 1,3-Dimethyluric acid g) 1-methyluric acid h) 3-Methylxanthine 6 hr excretion after steady state. Theophylline alone (4 mg/kg/6 hr for 3 days) in a)-d). e)-h) theophylline day 1-3, plus erythromycin (500 mg/6 hr) on days 2 and 3 Metabolites expressed as theophylline equivalents No significant differences. Healthy 20-30 yr olds, wt 60-80 kg MISSOURI; ANTIBIOTICS; AUTONOMIC DRUGS; DRUG INTERACTION; DRUGS; THEOPHYLLINES; METABOLITES	Malathil, S. Dutta, A. Ryan, P.B. Pingleton, S.K. Kelly, S.J. 1982 Research Communications in Clinical Pathology and Pharmacology 35(2):341-344

Uracil, 5-fluoro- (8 CI) (VAN)
2,4(1H,3H)-Pyrimidinedione, 5-fluoro- (9 CI)
51-21-8
C4-H3-F-N2
MW 130.08, MP 282-283 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8540 Blood, plasma	Ingestion	GC/MS Microbiological		a) 30-850 ng/ml b) 80-1200 ng/ml	a) Not given b) Not given	a) Gas chromatography-mass spectrometry b) Microbiological analysis After 200-600 mg. Correlation, r=0.956 Cancer patients ADULTS; DRUG THERAPY; DRUGS; COMPARATIVE EVALUATIONS; CHEMOTHERAPY; BLOOD PLASMA; MEASUREMENT METHODS	Isomura, M. Higuchi, S. Kawamura, S. 1981 Journal of Chromatography 226:433-439

Urea, 1-((p-chlorophenyl)sulfonyl)-3-propyl- (8 CI)
Benzenesulfonamide, 4-chloro-N-((propylamino)carbonyl)- (9 CI)
94-20-2
C10-H13-Cl-N2-O3-S
MW 276.75, MP 127-129 C (also reported 125-127 C)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8541 Blood, plasma	Ingestion	HPLC	3	a) Not given b) Not given c) Not given	a) 523 ug/ml b) 422 ug/ml c) Approximately 500 ug/ml	a) 10 hr after unknown dose. Plasma glucose 33 mg/dl b) 11 hr after 9 g. Plasma glucose 44 mg/dl c) 14 hr after 22 g. Plasma glucose 64 mg/dl Peaks. Hydrochlorothiazide and digoxin also present in c). 24 yr old female alcoholic, 19 yr old woman, 14 yr old boy, overdoses, nondiabetics Compensated metabolic acidosis, hypokalemia. Disoriented, combative behavior, seizures, increased heart rate, shortness of breath, increased blood pressure. ADOLESCENTS; ADULTS; SUICIDE; BLOOD PLASMA; DRUG ABUSE	Heatherall, R.C. Green, P.T. Kanick, S. Done, N. 1981 Journal of Analytical Toxicology 5:287-291

Valeric acid, 2-propyl-, sodium salt (8 CI)
Pentanoic acid, 2-propyl-, sodium salt (9 CI)
1069-66-5
C8-H16-O2.Na
MW 167.23

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8542 Blood, plasma	Ingestion	GC	a) 1 b) 1	a) 250-570 umol/l b) 100-330 umol/l	a) Not applicable b) Not applicable	a) Initial measurement and about 4 hr after 1.2 g. 330 umol/l at 0 hr b) Initial measurement and 2 hr after 700 mg. Final measurement 220 umol at 0 hr Patients on phenytoin and Na valproate. Estimated from graph. Epileptic patients BLOOD PLASMA; SALIVA; ANTICONVULSANTS; DRUG INTERACTION; DRUGS; MEASUREMENT METHODS	Knott, C. Hanshaw-Thomas, A. Reynolds, F. 1982 British Medical Journal 284:13-16

Valeronitrile, 5-((3,4-dimethoxyphenethyl)methylamino)-2-(3,4-dimethoxyphenyl)-2-isopropyl- (8 CI)
Benzeneacetonitrile, alpha-(3-((2-(3,4-dimethoxyphenyl)ethyl)methylamino)propyl)-3,4-dimethoxy-alpha- (1-methylethyl)- (9 CI)
52-53-9
C27-H38-N2-O4
MW 454.59, BP 243-246 C at 0.01 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8543 Blood, plasma	Injection Ingestion	HPLC	11	a) 328-16.5 ng/ml b) 9.3-122.1 ng/ml c) 3.8-117.5 ng/ml d) Not given	a) Not given b) Not given c) Not given d) 114.3 +or- 32.7 ng/ml	a) 2 min and 4 hr after 10 mg IV bolus b) 15 and 45 min after single 120 mg oral dose Final level 35.8 +or- 20 ng/ml 6 hr after dose c) Norverapamil (metabolite) 15 min and 1.25 hr after single 120 mg oral dose. Finaldi measurement 78.3 +or- 39 ng/ml at 6 hr d) Steady-state reached 13 min after 10 mg IV bolus and rapid-loading infusion of 0.375 mg/min over 30 min. Maintenance infusion of 0.125 mg/min for at least 6 hr Range of means Patients with history of tachycardia and controls, mean age 37 yr ADULTS; HEART DISEASES; BLOOD PLASMA; ANTIARRHYTHMIC AGENTS; COMPARATIVE EVALUATIONS; DRUGS	Reiter, M.J. Shand, D.G. Pritchett, E.L.C. 1982 Clinical Pharmacology and Therapeutics 32(6):711-720

Vancomycin
1404-90-6
C66-H75-C12-N9-O24
MW approx 3300

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8546 Blood, serum	Ingestion	Chem	1	Not given	<5 ug/ml	Infant after 2,000 mg/1.73 sq m/24 hr in 4 divided doses, for 14 days Congenital muscular dystrophy patient with sepsis. Toxin titer fell to undetectable levels, diarrhea resolved. BLOOD SERUM; DRUG THERAPY; INFANTS; ANTIBIOTICS; INFECTION	Batts, D.H. Martin, D. Holmes, H. Silva, J. Fohety, F.H. 1985 Journal of Pediatrics 97(1):151-153

Vitamin A
11103-57-4
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8545 Blood, plasma		HPLC		a) Not given b) Not given c) Not given	a) 284 +or- 39 ng/ml b) 233 +or- 58 ng/ml c) 267 +or- 76 ng/ml	a) Day 1 b) Day 14 c) Day 28 Patients receiving 13-cis-retinoic acid, at doses increasing from 0.5 mg/kg on day 1 to 4 mg/kg twice daily on day 25. Lower normal limit about 300 ng/ml. BLOOD PLASMA; DRUG THERAPY; DRUGS; CHEMOTHERAPY	Kerr, I.B. Lippman, M.E. Jenkins, J. Myers, C.E. 1982 Cancer Research 42:2669-2673

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8546 Blood, plasma	Ingestion	AAS	32	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 101 +or- 5 ug/dl b) 157 +or- 15 ug/dl c) 148 ug/dl d) 128 ug/dl e) 111 +or- 7 ug/dl	a) Initial level, 32 subjects b) 100 mg supplement, 8 subjects c) 50 mg supplement, 8 subjects d) 15 mg supplement, 8 subjects e) No supplement, 8 subjects Supplement Zn-acetate capsule daily for 60 days 4-wk peak of biweekly fasting samples. b),c),d) significantly higher than a) (p<0.05). c),d) estimated from graph Alterations in high-density lipoprotein cholesterol thought transient, not dose-related Healthy non-obese 18-40 yr old university students ADULTS; SEX; NUTRITIONAL DISORDERS; BLOOD PLASMA; CHOLESTEROLS; METALS; ZINC	Freeland-Graves, J.H. Friedman, B.J. Han, W.-H. Shorey, R.L. Young, R. 1982 American Journal of Clinical Nutrition 35:988-992
8547 Blood, plasma	Ingestion	AAS	10	a) Not given b) Not given c) Not given d) Not given	a) 0.991 +or- 0.102 ppm b) 1.486 +or- 0.224 ppm c) 1.226 +or- 0.140 ppm d) 0.935 +or- 0.065 ppm	a) Presupplementation, wk 1-5, 50 samples b) Supplementation, wk 6-10, 15 mg/d, 50 samples c) Postsupplementation, wk 12, 10 samples d) Postsupplementation, wk 15, 10 samples 10 subjects Significant difference between a) and b) (p<0.05) Healthy 17-37 yr old students and faculty, Houston Baptist University, TX TEXAS; BLOOD PLASMA; HAIR; SALIVA; COPPER; ZINC; DIETS	Lane, H.W. Warren, D.C. Sgoyres, M.B. Cotham, A.C. 1982 Biological Trace Element Research 4:83-93
8548 Blood, serum	Ingestion	AAS	6	a) Not given b) Not given	a) 78 +or- 6 ug/dl b) 98 +or- 5 ug/dl S.E.	a) Prestudy b) After 15 mg/day for 83 days Difference significant (p<0.05) Healthy 65-74 yr olds ADULTS; AGE; BLOOD SERUM; FECES; IRON; METALS; ZINC; DIETS	Tarnlund, J.R. Michel, M.C. Hayes, W.R. King, J.C. Morgan, S. 1982 American Journal of Clinical Nutrition 35:1033-1040

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Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 900 C, VP 1 mm Hg at 487 C, 10 mm Hg at 598 C (CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	BASES	MEAN	GENERAL INFORMATION	REFERENCE
8549 Hair	Ingestion	AAS	10	a) Not given b) Not given c) Not given d) Not given	a) 310.6 +or- 26.2 ppm b) 335.8 +or- 51.2 ppm c) 429.1 +or- 89.8 ppm d) 239.4 +or- 75.5 ppm	a) Presupplementation, wk 1-5, 50 samples b) Supplementation, wk 6-10, 15 mg/d, 50 samples c) Postsupplementation, wk 12, 10 samples d) Postsupplementation, wk 15, 10 samples 10 subjects No significant differences Healthy 17-37 yr old students and faculty, Houston Baptist University, TX TEXAS; BLOOD PLASMA; HAIR; SALIVA; COPPER; ZINC; DIETS	Lane, H.W. Warren, B.C. Squyres, H.S. Cotham, A.C. 1982 Biological Trace Element Research 4:83-93
8550 Saliva	Ingestion	AAS	10	a) Not given b) Not given c) Not given d) Not given	a) 0.105 +or- 0.023 ppm b) 0.086 +or- 0.015 ppm c) 0.049 +or- 0.011 ppm d) 0.059 +or- 0.008 ppm	a) Presupplementation, wk 1-5, 50 samples b) Supplementation, wk 6-10, 15 mg/d, acetate, 50 samples c) Postsupplementation, wk 12, 10 samples d) Postsupplementation, wk 15, 10 samples 10 subjects, No significant differences Healthy 17-37 yr old students and faculty, Houston Baptist University, TX TEXAS; BLOOD PLASMA; HAIR; SALIVA; COPPER; ZINC; DIETS	Lane, H.W. Warren, B.C. Squyres, H.S. Cotham, A.C. 1982 Biological Trace Element Research 4:83-93

1,8-Naphthyridine-3-carboxylic acid, 1-ethyl-1,4-dihydro-7-methyl-4-oxo-
389-08-2
C12-H12-N2-O3
MW 232.23, MP 229-230 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8551 Blood, plasma	Ingestion	Spectrofluorometry	a) 2-6 b) 7-8	a) 15.3-27.8 ug/ml b) 11.8-30.6 ug/ml	a) Not given b) Not given	a) Initial measurement and 2.5 hr after 1 g. 20.5 ug/ml at 5.5 hr. Mean AUC 337.7 ug/ml x hr. Subjects 64-89 yr old b) Initial measurement and 2.5 hr after 1 g. 13.3 ug/ml at 5.5 hr. 196.3 ug/ml x hr. Subjects 21-36 yr old Combined data for nalidixic acid and 7-hydroxynalidixic acid (metabolite). Healthy volunteers ADULTS; AGE; BLOOD PLASMA; ANTIBIOTICS; DRUGS; COMPARATIVE EVALUATIONS	Barbeau, G. Bolanger, P.-M. 1983 Journal of Clinical Pharmacology 23:484-486

1H-Benzimidazole, 2-(4-thiazolyl)-
148-79-8
C10-H7-N3-S
MW 201.26, MP 304-305 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8552 Blood, serum	Ingestion	HPLC		a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 5.0 ug/ml b) 3.8 ug/ml c) 11.7 ug/ml d) 7.1 ug/ml	a) Peak, 1 hr after 25 mg/kg b) Peak, 5-OH thiabendazole (metabolite) at 3.5 hr after 25 mg/kg thiabendazole c) Peak, glucuronide ester of 5-OH thiabendazole at 6 hr after 25 mg/kg thiabendazole d) Peak, sulfate ester of 5-OH thiabendazole at 3 hr after 25 mg/kg thiabendazole 37 yr old anephric patient, wt 36.1 kg BLOOD SERUM; DRUG THERAPY; DRUGS; HEMODIALYSIS; ADULTS; KIDNEY DISEASES; METABOLITES	Bauer, L.A. Zaloga, V.A. Watts, H.T. Ballinger, J. 1982 Journal of Clinical Pharmacology 22:376-380

457

1H-Indene-3-acetic acid, 5-fluoro-2-methyl-1-((4-methylsulfinyl)phenyl)methylene)-, (S)-
30194-50-2
C20-H17-F-03-S
MW 356.4, MP 182-185 C (dec)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8553 Blood, plasma	Ingestion	HPLC	4	a) 12-0.5 ug Eq/ml b) 12-1.8 ug Eq/ml c) 6-1.6 ug Eq/ml	a) Not given b) Not given c) Not given	a) 0.5-12 hr during last interval of 200 mg/12 hr for 7 days b) Sulfide metabolite 0.5-12 hr during last interval of 200 mg/12 hr for 7 days c) Sulfone metabolite 0.5-12 hr during last interval of 200 mg/12 hr for 7 days Estimated from graphs Healthy 22-30 yr olds ADULTS; BLOOD PLASMA; ANTI-INFLAMMATORY AGENTS; DRUGS; COMPARATIVE EVALUATIONS	Dujovne, C.A. Pitterman, A. Vincek, W.C. Bobrinska, M.R. Davies, R.O. Duggan, D.E. 1983 Clinical Pharmacology and Therapeutics 33(2):172-177
8554 Blood, plasma	Ingestion	HPLC	12	a) 3.5-0.3 ug/ml b) 2.9-1.0 ug/ml c) 1.8-0.5 ug/ml d) 3.95-0.5 ug/ml e) 5.6-2.7 ug/ml f) 2.1-1.6 ug/ml g) 6.5-0.3 ug/ml h) 5.0-1.1 ug/ml i) 1.9-1.0 ug/ml j) 6.2-0.2 ug/ml k) 7.1-2.9 ug/ml l) 2.7-2.2 ug/ml	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given	a) 2 and 12 hr after 200 mg 2X/d, day 1. 0.6 ug/ml at 24 hr b) Sulfide metabolite, 4 and 12 hr. 1.8 ug/ml at 24 hr c) Sulfone metabolite, 4 and 12 hr. 0.9 ug/ml at 24 hr d) 2 and 24 hr, day 7 e) Sulfide metabolite, 2 and 24 hr f) Sulfone metabolite, 2 and 24 hr g) 2 and 24 hr after 400 mg/d, day 1 h) Sulfide metabolite, 4 and 24 hr i) Sulfone metabolite, 4 and 24 hr j) 2 and 24 hr, day 7 k) Sulfide metabolite, 4 and 24 hr l) Sulfone metabolite, 4 and 24 hr Estimated from graph At steady state, area under plasma concentration-time curve over 24 hr for sulfide metabolite was greater after once daily dose while trough concentrations did not differ. Healthy volunteers, 18-31 yr old, 50-84 kg. ANTI-INFLAMMATORY AGENTS; COMPARATIVE EVALUATIONS; ADULTS; BLOOD PLASMA	Swanson, B.N. Boppana, V.K. Vlasses, P.H. Holmes, G.I. Monsell, K. Ferguson, R.K. 1982 Clinical Pharmacology and Therapeutics 32(3):397-403

1H-Purine-2,6-dione, 3,7-dihydro-7-(2-hydroxypropyl)-1,3-dimethyl-
603-00-5
C10-H14-N4-O3
MW 230.24, MP 135-136 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8555 Blood, plasma	Ingestion	Photodensitometry	5	5.3-2.0 ug/ml	Not given	Levels of unchanged proxyphylline 1.0 and 12 hr after 300 mg. Measurement at 0.5 hr, 5 ug/ml. Estimated from graph Healthy subjects, 23-38 yr old, 73-98 kg ADULTS; BLOOD PLASMA; URINE; THEOPHYLLINES; DRUGS; METABOLISM	Tarrus, E. Garcia, I. Segura, J. 1981 Journal of Pharmaceutical Sciences 70(5):542-545
8556 Urine	Ingestion	TLC Photodensitometry	5	a) Not given b) Not given c) Not given d) Not given	a) 8.5 +or- 3.0% b) 16.9 +or- 2.9% c) 12.6 +or- 2.9% d) 30.2 +or- 3.6% % of dose	a) Drug at 0 hr b) Metabolite at 0 hr c) Drug at 24 hr d) Metabolite at 24 hr Dose: 300 mg. Cumulative excretions. Healthy subjects, 23-38 yr old, 73-98 kg ADULTS; BLOOD PLASMA; URINE; THEOPHYLLINES; DRUGS; METABOLISM	Tarrus, E. Garcia, I. Segura, J. 1981 Journal of Pharmaceutical Sciences 70(5):542-545

1H-1,4-Benzodiazepine-3-carboxylic acid, 7-chloro-2,3-dihydro-2-oxo-5-phenyl-, monopotassium salt, compd. with potassium hydroxide (1:1)
57109-90-7
C16-H11-Cl-N2-O3.H-K-O.K
MW 400.9

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8557 Blood, plasma	Ingestion	GC	10	159-202 ng/ml	175 ng/ml	Range of means for last 3 days, and overall mean for last 3 days during 10 day treatment with 7.5 mg nightly with or without antacid, which had no significant effect on plasma levels. Data also for desmethyldiazepam Healthy 23-34 yr olds BLOOD PLASMA; DRUG INTERACTION; DRUGS; ORAL CONTRACEPTIVES; SEDATIVES; METABOLITES	Shader, R.I. Ciraulo, D.A. Greenblatt, D.J. Hamrin, J.S. 1982 Clinical Pharmacology and Therapeutics 31(2):180-183

2-Butanol, 4-(dimethylamino)-3-methyl-1,2-diphenyl-, propionate (ester), (2S,3R)- (8 CI)
Benzeneethanol, alpha-(2-(dimethylamino)-1-methylethyl)-alpha-phenyl-, propanoate (ester), (S-(R*,S*))- (9 CI)
469-62-5
C23-H29-N-O2
MW 339.48, MP 75-76 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0550 Blood, plasma	Ingestion	GC	3	a) 0.20-0.0025 ug/ml b) 0.60-0.15 ug/ml c) 0.15-0.60 ug/ml d) 0.10-1.1 ug/ml e) 0.5-0.1 ug/ml f) 5.0-2.5 ug/ml	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 2 and 11 hr after 130 mg. Initial measurement 0.09 ug/ml at 1 hr b) Norpropoxyphene (NP) 6 and 24 hr after 130 mg. Initial measurement 0.15 ug/ml at 1 hr c) 10 and 90 hr after 13 doses, 130 mg q. Final dose at 96 hr. Fraction of propoxyphene (P) converted to NP decreased from approximately 50% to 5% d) NP, 2 and 36 hr as in c) e) Former heroin addicts, 6 and 36 hr during maintenance dose omission study. Maintenance dose (550 mg 2X/day for 12 wk) omitted on study days f) NP, 6 and 36 hr as in e) As hydrochloride Healthy volunteers, heroin addicts on maintenance doses, Philadelphia, PA. PENNSYLVANIA; ADULTS; BLOOD PLASMA; METABOLITES; ANALGESICS; COMPARATIVE EVALUATIONS; DRUG THERAPY	Interrisi, C.E. Colburn, W.A. Vereby, K. Dayton, H.B. Moody, G.E. O'Brien, C.P. 1982 Clinical Pharmacology and Therapeutics 31(2):157-167

2-Naphthacenecarboxamide, 4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,5,10,12,12a-pentahydroxy-6-methyl-1,11-dioxo- (8 CI) (VAN)
2-Naphthacenecarboxamide, 4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,5,10,12,12a-pentahydroxy-6-methyl-1,11-dioxo-, (4S-(4alpha,4aalpha,5alpha,5aalpha,6alpha,12aalpha))- (9 CI)
564-25-0
C22-H24-N2-O8
MW 444.43

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0559 Blood	Ingestion	Fluorometry	14	a) 1.71-5.15 ug/ml b) 0.97-4.77 ug/ml c) 0.21-4.06 ug/ml d) 0.28-0.24 ug/ml e) 0.19-3.06 ug/ml f) 0.66-3.51 ug/ml g) 0.48-3.03 ug/ml	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable g) Not applicable	a) 30 min and 2 hr after 200 mg, with water only. 1.70 ug/ml at 24 hr. 24 hr AUC 89.4 +or- 7.7 ug/mlXhr b) 30 min and 2 hr after 200 mg with whiskey. 2.20 ug/ml at 24 hr. 24 hr AUC 81.4 +or- 5.3 ug/mlXhr c) 30 min and 4 hr after 200 mg with red wine. 1.14 ug/ml at 24 hr. 24 hr AUC 64.4 +or- 7.4 ug/mlXhr d) 30 min and 4 hr after 200 mg with nonalcoholic white wine. 1.24 ug/ml at 24 hr. 24 hr AUC 68.7 +or- 7.8 ug/mlXhr e) 30 min and 4 hr after 200 mg with white wine plus acetic acid. 1.48 ug/ml at 24 hr. 24 hr AUC 52.2 +or- 6.5 ug/mlXhr f) 30 min and 4 hr after 200 mg with red wine (tannic acid 1.6 mg/l). 1.16 ug/ml at 24 hr. 24 hr AUC 56.0 +or- 5.0 ug/mlXhr g) 30 min and 4 hr after 200 mg with red white (tannic acid 0.6 mg/l). 1.54 ug/ml at 24 hr. 24 hr AUC 54.2 +or- 6.3 ug/mlXhr. 6 subjects in a)-c) and 8 in d)-g). Healthy 20-23 yr olds, wt 54-70 kg. FINLAND; BLOOD; URINE; ANTIBIOTICS; DRUG INTERACTION; DRUGS; COMPARATIVE EVALUATIONS; ALCOHOLS; ALCOHOLIC BEVERAGES; DIETS	Mattila, M.J. Laisi, U. Linnoila, M. Salonen, R. 1982 Acta Pharmacologica et Toxicologica 50:370-373
0560 Urine	Ingestion	Fluorometry	14	a) 4.4-13.2 mg b) 50.7-74.6 mg	a) Not applicable b) Not applicable	a) 0-4 hr after 200 mg b) 0-24 hr after 200 mg Range for doses given with different types of alcoholic beverages. Red wine high in acetic acid retarded absorption of drug. Healthy 20-23 yr olds, wt 54-70 kg. FINLAND; BLOOD; URINE; ANTIBIOTICS; DRUG INTERACTION; DRUGS; COMPARATIVE EVALUATIONS; ALCOHOLS; ALCOHOLIC BEVERAGES; DIETS	Mattila, M.J. Laisi, U. Linnoila, M. Salonen, R. 1982 Acta Pharmacologica et Toxicologica 50:370-373

2-Naphthaleneacetic acid, 6-methoxy-alpha-methyl-, (+)- (8 CI)
2-Naphthaleneacetic acid, 6-methoxy-alpha-methyl-, (S)- (9 CI)
22204-53-1
C14-H14-O3
MW 230.26, MP 155.3 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8561 Blood, fetal			2	a) Not given b) Not given	a) 59.5 ug/ml b) 60 ug/ml	a) Preterm twin b) Preterm twin Dose to mother 250 mg/6 hr, with last dose at 5 hr before delivery. Total dose 1 g. Abnormalities in blood clotting and renal function, raised serum bilirubin levels, hypoxemia. Low plasma levels of prostaglandin E, closed ductus arteriosus. Death of one twin, apparently due to drug. PREMATURE INFANTS; KINETICS; BLOOD PLASMA; PREGNANCY; DRUGS	Wilkinson, A.R. 1980 Lancet 2(8194):591-593
8562 Blood, serum	Ingestion	HPLC	24	a) Not given b) Not given	a) <10 ug/ml b) >50 ug/ml	a) Trough levels, nonresponders b) Trough levels, 76% responders Drug response based on 9 efficacy parameters. Doses, 250, 750 or 1500 mg IR/day, 2 wk Rheumatoid arthritis patients, mean age 48.1 +or- 12.7 yr. Mean disease duration, 7.9 +or- 6.6 yr. Linear dose-response relationship (P<0.05) between aspreon and joint count, patient's pain assessment, activities of daily living index, physicians assessment, and grip strength. URINE; ANTI-INFLAMMATORY AGENTS; COMPARATIVE EVALUATIONS; ADULTS; RHEUMATOID ARTHRITIS	Day, R.O. Furst, D.E. Brumpcole, S.H. Kamm, B. Roo, R. Paulus, H.E. 1982 Journal of Clinical Pharmacology and Therapeutics 31(6):723-741

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2-Naphthaleneacetic acid, 6-methoxy-alpha-methyl-, (+)- (8 CI)
2-Naphthaleneacetic acid, 6-methoxy-alpha-methyl-, (S)- (9 CI)
22204-53-1
C14-H14-O3
MW 230.26, MP 155.3 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8563 Urine	Ingestion	HPLC	24	Not given	70.5 +or- 18.6% of dose	24 hr steady state samples, 22 of 24 patients. Doses, 250, 750 or 1500 mg 2X/day, 2 wk. Rheumatoid arthritis patients, mean age 48.1 +or- 12.7 yr. Mean disease duration, 7.9 +or- 6.6 yr. Linear dose-response relationship (P<0.05) between naproxen and joint count, patient's pain assessment, activities of daily living index, physicians assessment, and grip strength. URINE; ANTI-INFLAMMATORY AGENTS; COMPARATIVE EVALUATIONS; ADULTS; RHEUMATOID ARTHRITIS	Day, R.O. Furst, D.E. Drumgoole, S.H. Kamm, B. Roe, R. Paulus, H.E. 1982 Journal of Clinical Pharmacology and Therapeutics 31(6):733-741

2-Oxazolepropionic acid, 4,5-diphenyl- (8 CI)
2-Oxazolepropanoic acid, 4,5-diphenyl- (9 CI)
21256-18-8
C18-H15-N-O3
MW 293.34

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8564 Blood, plasma	Ingestion	HPLC	15	a) Not given b) Not given c) Not given	a) 63 +or- 8 ug/ml b) 45 +or- 4 ug/ml c) 47 +or- 3 ug/ml S.E.	a) 2-9 hr after 600 mg, controls b) 2-9 hr after 600 mg, patients with partial renal impairment c) 2-9 hr after 600 mg, dialysis patients Peaks Renally impaired 46-65 yr olds, wt 55-130 kg. Long-term maintenance hemodialysis patients, 34-64 yr old, wt 53-66 kg. Healthy controls, 21-24 yr old, wt 52-103 kg URINE; ANTI-INFLAMMATORY AGENTS; COMPARATIVE EVALUATIONS; HEMODIALYSIS; ADULTS; RHEUMATOID ARTHRITIS; BLOOD PLASMA	Chiang, S.T. Harrison, G. Knowles, J.A. Emslie, E.W. Walker, B.R. 1982 Journal of Clinical Pharmacology and Therapeutics 31(8):508-518

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2-Oxazolepropionic acid, 4,5-diphenyl- (8 CI)
2-Oxazolepropanoic acid, 4,5-diphenyl- (9 CI)
21256-18-8
C18-H15-N-O3
MW 293.34

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8565 Urine	Ingestion	HPLC	10	a) Not given b) Not given	a) 3.9 +or- 0.3% of dose b) 0.7 +or- 0.2% of dose	a) Cumulative excretion, collected at 24 hr intervals for 10 days after single 600 mg dose, controls b) As in a), renally impaired patients Renally impaired 46-65 yr olds, wt 55-100 kg. Healthy controls, 21-24 yr old, wt 52-103 kg URINE; ANTI-INFLAMMATORY AGENTS; COMPARATIVE EVALUATIONS; HEMODIALYSIS; ADULTS; RHEUMATOID ARTERITIS; BLOOD PLASMA	Chiang, S.T. Morrison, G. Knowles, J.A. Buelius, H.W. Walker, B.R. 1982 Journal of Clinical Pharmacology and Therapeutics 31(4):509-515

2-Piperidineacetic acid, alpha-phenyl-, methyl ester
113-45-1
C14-H19-N-O2
MW 233.30, MP 74-75 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8566 Blood, plasma	Ingestion	GC	12	a) Not applicable b) Not applicable c) Not applicable	a) 486 +or- 86 ug/ml b) <10 ng/ml	a) Peaks 1-2 hr after 20 mg as radiolabeled hydrochloride. Total radioactivity b) Unchanged drug, total radioactivity after dose in a) METABOLISM; METABOLITES; RADIOISOTOPES; BLOOD PLASMA; URINE; DRUGS; STIMULANTS	Bedalieu, E. Bartlett, M.F. Waldes, L.M. Darrow, W.R. Egger, H. Wagner, W.E. 1982 Drug Metabolism and Disposition 10(6):700-709

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2-Piperidineacetic acid, alpha-phenyl-, methyl ester
113-45-1
C14-H19-N-O2
MW 233.30, MP 74-75 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8567 Blood, plasma	Ingestion	GC	a) 19 b) 20 c) 16	a) Not given b) Not given c) Not given	a) 10.95 +or- 4.93 ng/ml b) 19.39 +or- 8.30 ng/ml c) 41.75 +or- 22.75 ng/ml	a) After 0.25 mg/kg 2X/d, 1 wk b) After 0.50 mg/kg 2X/d, 1 wk c) After 1.0 mg/kg 2X/d, 1 wk Subjects with attention disorders and hyperactivity, mean age 111.2 +or- 16.7 months, mean IQ 98.2 +or- 14.2, wt 29.5 +or- 6.7 kg, systolic blood pressure 103.1 +or- 8.6 mm Hg, diastolic blood pressure 67.8 +or- 7.4 mm Hg Behavioral improvement varied with dose. 20% had side effects (gastrointestinal symptoms, anorexia and insomnia) at highest dose. Increases in diastolic and systolic blood pressures disappeared when medication was discontinued. COMPARATIVE EVALUATIONS; CHILDREN; BEHAVIOR DISORDERS; BLOOD PLASMA; DRUGS	Winsberg, B.G. Kupietz, S.S. Sverd, J. Hungund, B.L. Young, H.L. 1982 Psychopharmacology 76:329-332
8568 Urine	Ingestion	GC Radiometry	a) 3 b) 12	a) 69-86% of dose b) 77-96.7% of dose c) Not applicable	a) 78% of dose b) 84% of dose c) <10 ng/ml	a) 72 hr cumulative excretion after 20 mg as hydrochloride. Measured as alpha-phenyl-2-piperidine acetic acid (metabolite) b) 96 hr cumulative excretion after 20 mg as radiolabeled hydrochloride. Total radioactivity c) Unchanged drug, total radioactivity after dose and time in b) METABOLISM; METABOLITES; RADIOISOTOPES; BLOOD PLASMA; URINE; DRUGS; STIMULANTS	Redalieu, E. Bartlett, M.F. Waldon, L.M. Barrow, W.R. Egger, R. Wagner, W.E. 1982 Drug Metabolism and Disposition 10(6):708-709

2-Propanol, 1-(isopropylamino)-3-(1-naphthyloxy)- (8 CI)
2-Propanol, 1-((1-methylethyl)amino)-3-(1-naphthalenyloxy)- (9 CI)
525-66-6
C16-H21-N-O2
MW 259.34, MP 96 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0569 Blood, plasma	Ingestion	GC-EC	7	a) 30-100 ng/ml b) 350-932 ng/ml	a) Not given b) Not given	a) At 2 hr b) Naphthoxylactic acid (metabolite), 2 hr Dose 160 mg/day, A.M. Hypertensive patients, chronic therapy BLOOD PLASMA; ANTIHYPERTENSIVE AGENTS; DRUGS; MEASUREMENT METHODS; CARDIOVASCULAR DISEASES; HEART DISEASES; HYPERTENSION	Easterling, R.E. Walle, T. Conradi, E.C. Gaffney, T.E. 1979 Journal of Chromatography 162:439-445
0570 Blood, plasma	Ingestion	HPLC	150	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 4.8 +or- 3.6 ng/ml b) 5.1 +or- 2.9 ng/ml c) 3.8 +or- 3.9 ng/ml d) 9.8 +or- 6.0 ng/ml e) 6.1 +or- 4.7 ng/ml f) 16.0 +or- 11.5 ng/ml g) 13.3 +or- 7.8 ng/ml h) 10.2 +or- 9.0 ng/ml	a) 80 mg/day, 4x/day b) 80 mg/day, 2x/day c) 80 mg/day, one long-acting capsule (LAC) d) 120 mg/day, 3x/day e) 120 mg/day, one LAC f) 160 mg/day, 4x/day g) 160 mg/day, 2x/day h) 160 mg/day, one LAC Steady state levels. Degree of beta blockade related to daily dose, not to number of divided doses. Normal, 18-40 yr olds, mean ht 70 inches, mean wt 150 lbs ADULTS; BLOOD PLASMA; ANTIHYPERTENSIVE AGENTS; COMPARATIVE EVALUATIONS	Mullane, J.F. Kaufman, J. Dvornik, D. Coelho, J. 1982 Clinical Pharmacology and Therapeutics 32(6):692-700
0571 Blood, plasma	Injection Ingestion	GC-EC	10	a) 0.9-199 ng/ml b) 50-8 ng/ml	a) Not given b) Not given	a) 15 min and 2.2 hr after 3.2 mg/kg, oral. Level 50 ng/ml at 8 hr b) 15 min and 8 hr after 0.2 mg/kg, IV Data also for timolol. Some data estimated from graph. Normal, 22-34 yr olds, wt 52-86 kg BLOOD PLASMA; DRUGS; COMPARATIVE EVALUATIONS; ADULTS; AUTONOMIC DRUGS; ANTIHYPERTENSIVE AGENTS	Wilson, T.W. Firor, W.B. Johnson, G.E. Holmes, G.I. Tsianco, M.C. Numer, P.B. Davies, R.O. 1982 Clinical Pharmacology and Therapeutics 32(6):676-685

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2-Propanol, 1-(isopropylamino)-3-(1-naphthyloxy)- (8 CI)
2-Propanol, 1-((1-methylethyl)amino)-3-(1-naphthalenyloxy)- (9 CI)
525-66-6
C16-H21-N-O2
MW 259.34, MP 96 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0872 Blood, plasma	Ingestion	Fluorometry	6	28-122 ng/ml	52 +or- 36 ng/ml	Mean steady state levels during 40 mg propranolol/6 hr 24 hr before and 8 hr after 2.5-3.0 mg/kg lidocaine infusion over 10 min. Lidocaine elimination significantly reduced Healthy 22-31 yr old non-smokers BLOOD PLASMA; ANTIARRHYTHMIC AGENTS; AUTONOMIC DRUGS; DRUG INTERACTION; DRUGS	Conrad, K.A. Byers, J.H., Jr. Finley, P.R. Burnham, L. 1983 Clinical Pharmacology and Therapeutics 33(2):133-138
0873 Blood, plasma		RIA	6	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 542 ng/ml b) 231 ng/ml c) 359 ng/ml d) 624 ng/ml e) 35 ng/ml f) 209 ng/ml	a) 1280 mg/day b) 800 mg/day c) 720 mg/day d) 1280 mg/day e) 480 mg/day f) 960 mg/day Steady state peaks Propranolol-resistant hospitalized patients Resistance related to excessive protein binding, erythrocyte abnormality, alterations in metabolite levels, reduced beta receptor number, and postreceptor abnormalities. ADULTS; BLOOD PLASMA; DRUGS; COMPARATIVE EVALUATIONS; AUTONOMIC DRUGS	Steinberg, S.F. Bilezikian, J.P. 1983 Clinical Pharmacology and Therapeutics 33(2):163-171
0874 Blood, plasma	Ingestion	TLC Fluorometry	7	a) Not given b) Not given	a) 44 +or- 14 ug/l b) 42 +or- 14 ug/l S.E.	a) 2.7 +or- 1.1 hr after 60 mg, 7 subjects b) 2.3 +or- 1.0 hr after 60 mg propranolol, 2.5 mg hendroflumethiazide, and 25 mg hydralazine, 7 subjects Peaks Healthy 20-30 yr olds, wt 53-78 kg GERIATRY; ADULTS; BLOOD PLASMA; URINE; ANTIHYPERTENSIVE AGENTS; DIURETICS; DRUG INTERACTION; DRUGS	Schafer-Korting, M. Hutschler, E. 1980 European Journal of Clinical Pharmacology 21:319-323

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2-Propanol, 1-(isopropylamino)-3-(1-naphthyloxy)- (8 CI)
2-Propanol, 1-(((1-methylethyl)amino)-3-(1-naphthalenyloxy)- (9 CI)
525-66-6
C16-H21-N-O2
MW 259.34, MP 96 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8575 Blood, plasma	Ingestion	GC	a) b) 3 c) 4	a) 50-1.0 ng/ml b) 210-10.0 ng/ml c) 800-50 ng/ml	a) Not given b) Not given c) Not given	a) 40 mg 2X/d b) 80 mg 2X/d c) 160 mg 2X/d Large variations in individual peak and trough times. Estimated from graph 28-59 yr old, hypertensives wt 58-99 kg DENMARK; ADULTS; HYPERTENSION; BLOOD PLASMA; URINE; ANTIHYPERTENSIVE AGENTS; DRUG THERAPY; DRUGS	Andreasen, F. Jakobsen, P. Kornerup, H.J. Pedersen, E.B. Pedersen, O.L. 1983 Clinical Pharmacology and Therapeutics 33(1):10-18
8576 Blood, serum						Review. Usefulness of serum levels of cardiac drugs in clinical practice. BLOOD SERUM; ANESTHETICS; ANTIARRHYTHMIC AGENTS; ANTIHYPERTENSIVE AGENTS; DIURETICS; DRUGS; STIMULANTS; REVIEW	Punnock, H.E. 1978 American Family Physician 17(4):194-196
8577 Blood, serum	Ingestion	GC	6	a) Not given b) Not given	a) 61 ng/ml b) 47 ng/ml	a) Steady state levels after 80 mg b) Steady state levels after 80 mg/12 hr for 5 days As hydrochloride. Healthy 22-33 yr olds Significant impairment of left ventricular function after 80 mg. CARDIAC EFFECTS; BETA BLOCKER; ADULTS; BLOOD SERUM; DRUGS	Ochs, H.R. Grube, E. Greenblatt, D.J. Knuchel, H. Bodem, G. 1983 Klinische Wochenschrift 60:521-525
8578 Blood, serum	Ingestion	Chem	7	20-65 ng/ml	Not given	After 80 mg/d in 4 doses, 15 days. 0.2 mg thyroxine/d also given, starting 3 wk before study. Mean serum T3 levels fell from 140-117 ng/dl during treatment, thyroxine levels unchanged. Healthy 19-36 yr olds ADULTS; HYPERTHYROIDISM; BLOOD SERUM; COMPARATIVE EVALUATIONS	Chambers, J.B., Jr. Pittman, C.S. Buda, A.E. 1982 Journal of Clinical Pharmacology 22:110-116

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2-Propanol, 1-(isopropylamino)-3-(1-naphthyloxy)- (8 CI)
2-Propanol, 1-((1-methylethyl)amino)-3-(1-naphthalenyloxy)- (9 CI)
525-66-6
C16-H21-N-O2
MW 259.34, MP 96 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8579 Milk						Review. General pharmacological principles associated with excretion of drugs and chemicals in human milk. PENNSYLVANIA; UNITED STATES; ADULTS; INFANTS; MILK; SALIVA; URINE; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTICOAGULANTS; ANTIPYRETICS; DIURETICS; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; CAFFEINE; NICOTINE; PESTICIDES; SODIUM; THEOPHYLLINES; ALCOHOLIC BEVERAGES; LACTATION; METABOLISM; METABOLITES; TOBACCOS	Berlin, C.M., Jr. 1981 Obstetrics and Gynecology 58(5)(supplement):178-2 38
8580 Urine	Ingestion	GC	a) 1 b) 3 c) 4	a) Not applicable b) 0.294-0.831 mg c) 1.697-4.620 mg	a) 0.120 mg b) Not given c) Not given	a) 40 mg 2X/d b) 80 mg 2X/d c) 160 mg 2X/d Amounts excreted over 24 hr. 28-59 yr old, hypertensive wt 58-99 kg DENMARK; ADULTS; HYPERTENSION; BLOOD PLASMA; URINE; ANTIHYPERTENSIVE AGENTS; DRUG THERAPY; DRUGS	Andreasen, P. Jakobsen, P. Kornerup, H.J. Pedersen, E.B. Pedersen, O.L. 1983 Clinical Pharmacology and Therapeutics 33(1):10-18

2-Propanol, 1-(tert-butylamino)-3-((4-morpholino-1,2,5-thiadiazol-3-yl)oxy)-, (S)-(-)- (8 CI)
2-Propanol, 1-((1,1-dimethylethyl)amino)-3-((4-(4-morpholinyl)-1,2,5-thiadiazol-3-yl)oxy)-, (S)- (9 CI)
26839-75-8
C13-H24-N4-O3-S
MW 316.42, MP 71.5-72.5 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8581 Blood, plasma	Injection Ingestion	GC	10	a) 123-25 ng/ml b) 15-3 ng/ml	a) Not given b) Not given	a) 1.4 and 8 hr after 0.4 mg/kg, oral. Level 25 ng/ml at 0.25 hr b) 15 min and 8 hr after 0.025 mg/kg, IV Data also for propanolol. Some data estimated from graph. Normal, 22-34 yr olds, wt 52-86 kg BLOOD PLASMA; DRUGS; COMPARATIVE EVALUATIONS; ADULTS; AUTONOMIC DRUGS; ANTIHYPERTENSIVE AGENTS	Wilson, T.W. Firor, W.R. Johnson, G.E. Holmes, G.I. Tolonne, H.C. Huber, P.B. Davies, R.O. 1982 Clinical Pharmacology and Therapeutics 32(6):676-685

2-Propanol, 1-(2-chloro-5-methylphenoxy)-3-((1,1-dimethylethyl)amino)-
14356-66-8
C14-H22-Cl-N-O2
MW 271.79

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0582 Blood, plasma	Ingestion	Radiometry GC/MS	a) 1 b) 1	a) 1.0-0.02 ug-Eq/ml b) 1.3-0.02 ug-Eq/ml	a) Not given b) Not given	a) 1 and 12 hr after 100 mg b) 2 and 12 hr after 100 mg Single metabolite, 1-tert-butylamino-3-(2-chloro-5-carboxyphenoxy)-propan-2-ol, accounted for almost all bupranolol detected. At peak levels 24% bound to plasma proteins Healthy 18-26 yr olds, wt 58-87 kg DOSE; METABOLITES; BLOOD; BLOOD PLASMA; ANTIHYPERTENSIVE AGENTS; AUTOMONIC DRUGS; DRUGS	Waller, A.E. Chasseaud, L.F. Dunn, B. Taylor, T. Darragh, A. Girkin, R. Down, W.H. Doyle, E. 1982 Drug Metabolism and Disposition 10(1):51-54
0583 Blood, whole	Ingestion	Radiometry GC/MS	a) 1 b) 1	a) 1.1 ug-Eq/ml b) 0.9 ug-Eq/ml	a) Not given b) Not given	a) 1 hr, b) 2 hr. Peak levels after 100 mg Healthy 18-26 yr olds, wt 58-87 kg DOSE; METABOLITES; BLOOD; BLOOD PLASMA; ANTIHYPERTENSIVE AGENTS; AUTONOMIC DRUGS; DRUGS	Waller, A.E. Chasseaud, L.F. Dunn, B. Taylor, T. Darragh, A. Girkin, R. Down, W.H. Doyle, E. 1982 Drug Metabolism and Disposition 10(1):51-54
0584 Urine	Ingestion	Radiometry GC/MS	2	Not given	87.5% of dose	24 hr cumulative excretion of radioactive label after 100 mg dose Healthy 18-26 yr olds, wt 58-87 kg DOSE; METABOLITES; BLOOD; BLOOD PLASMA; ANTIHYPERTENSIVE AGENTS; AUTONOMIC DRUGS; DRUGS	Waller, A.E. Chasseaud, L.F. Dunn, B. Taylor, T. Darragh, A. Girkin, R. Down, W.H. Doyle, E. 1982 Drug Metabolism and Disposition 10(1):51-54

2-Propanol, 1-(4-(2-methoxyethyl)phenoxy)-3-((1-methylethyl)amino)-, (+-)-
37350-58-6
C15-H25-N-O3
MW 267.38

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0585 Bile	Ingestion	GC	1	Not applicable	27.6 mg/dl	Suicide. Dose unknown. Salicylate level 22 mg/dl 17 yr old SUICIDE; BILE; BLOOD; LIVER; VITREOUS HUMOR; ANTIHYPERTENSIVE AGENTS; DRUG ABUSE; DRUGS	Holzbecher, M. Perry, B.A. Ellenberger, H.A. 1982 Journal of Forensic Sciences 27(3):715-717
0586 Blood	Ingestion	GC	1	Not applicable	5.6 mg/dl	Suicide. Dose unknown. Salicylate level 22 mg/dl 17 yr old SUICIDE; BILE; BLOOD; LIVER; VITREOUS HUMOR; ANTIHYPERTENSIVE AGENTS; DRUG ABUSE; DRUGS	Holzbecher, M. Perry, B.A. Ellenberger, H.A. 1982 Journal of Forensic Sciences 27(3):715-717
0587 Blood, plasma	Ingestion	GC	6	22-75 ng/ml	45 +or- 18 ng/ml	Mean steady state levels during 50 mg metoprolol/6 hr for 24 hr before and 0 hr after 2.5-3.0 mg/kg lidocaine infusion over 10 min. Lidocaine elimination significantly reduced Healthy 22-31 yr old non-smokers BLOOD PLASMA; ANTIARRHYTHMIC AGENTS; ANTAGONISTIC DRUGS; DRUG INTERACTION; DRUGS	Conrad, K.A. Byers, J.W., III Finley, P.R. Burnham, L. 1983 Clinical Pharmacology and Therapeutics 33(2):133-136

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2-Propanol, 1-(4-(2-methoxyethyl)phenoxy)-3-((1-methylethyl)amino)-, (+-)-
37350-58-6
C15-H25-N-O3
MW 267.38

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0588 Blood, plasma	Ingestion	GC/MS	15	a) 90-10 nmol/l b) 110-50 nmol/l c) 210-75 nmol/l d) 160-180 nmol/l	a) Not given b) Not given c) Not given d) Not given	a) 1 and 12 hr after 25 mg 2X/day, day 4 of continuous treatment, 20 nmol/l at 0 hr, 10 elderly subjects b) alpha-OH-metabolite 1 and 12 hr after metoprolol dose, 50 nmol/l at 0 hr, elderly subjects c) 2 and 7 hr after 50 mg 2X/day, day 4 of continuous treatment, 40 nmol/l at 0 hr, 5 young subjects d) Alpha-OH-metabolite 2 and 7 hr after metoprolol dose, 70 nmol/l at 0 hr, young subjects Estimated from graph 71-74 yr olds, wt 53-81 kg, non-smokers and young controls, Gothenburg, Sweden No effect of age on drug disposition. Systemic availability somewhat lower in elderly subjects. SWEDEN; ADULTS; AGE; CARDIOVASCULAR DISEASES; BLOOD PLASMA; DRUGS; COMPARATIVE EVALUATIONS; AUTONOMIC DRUGS; ANTIHYPERTENSIVE AGENTS	Regardh, C.G. Larsson, H. Lundahl, S. Lundberg, P. Steen, B. Hoffman, H.-J. Lagerstrom, P.-O. 1983 European Journal of Clinical Pharmacology 24:231-236
0589 Liver	Ingestion	GC	1	23-36 mg/100g	Not given	Suicide. Dose unknown. Salicylate level 22 mg/dl 17 yr old SUICIDE; BILE; BLOOD; LIVER; VITREOUS HUMOR; ANTIHYPERTENSIVE AGENTS; DRUG ABUSE; DRUGS	Holzbecher, M. Perry, R.A. Ellenberger, H.A. 1983 Journal of Forensic Sciences 27(3):715-717
0590 Vitreous humor	Ingestion	GC	1	Not applicable	4.2 mg/dl	Suicide. Dose unknown. Salicylate level 22 mg/dl 17 yr old SUICIDE; BILE; BLOOD; LIVER; VITREOUS HUMOR; ANTIHYPERTENSIVE AGENTS; DRUG ABUSE; DRUGS	Holzbecher, M. Perry, R.A. Ellenberger, H.A. 1983 Journal of Forensic Sciences 27(3):715-717

2-Pyridinemethanol, alpha-(3-(2,6-dimethyl-1-piperidinyl)propyl)-alpha-phenyl-, monohydrochloride, cis-(+-)-
61477-96-9
C22-H30-N2-O.Cl-H
MW 375

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8591 Blood, plasma	Injection	HPLC	10	a) 0.5-2.8 ug/ml b) 1.0-2.7 ug/ml	a) Not applicable b) Not applicable	a) 10-20 min after start of IV infusion b) 25-35 min after start of infusion Mean total dose 125.3 +or- 6.8 mg (1.54 +or- 0.13 mg/kg). Range of means estimated from graph. 48-62 yr old cardiac patients BLOOD PLASMA; ANTIARRHYTHMIC AGENTS; DRUGS	Phillips, N.B. Stack, R.S. Davis, D.D. Morris, K.G. Lee, K.L. Shand, D.G. Pritchett, E.L.C. 1982 Clinical Pharmacology and Therapeutics 32(2):236-239

2',6'-Acetoxylidide, 2-(diethylamino)- (8 CI)
Acetamide, 2-(diethylamino)-N-(2,6-dimethylphenyl)- (9 CI)
137-58-6
C14-H22-N2-O
MW 234.33, MP 68-69 C, BP 180-181 C at 4 mm Hg, 159-160 C at 2 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8582 Blood, plasma	Injection	GC	6	a) Not given b) Not given c) Not given d) Not given	a) 1.7 +or- 0.2 ug/ml b) 2.0 +or- 0.2 ug/ml c) 2.5 +or- 0.2 ug/ml d) 3.0 +or- 0.5 ug/ml	a) After 1 mg/kg IV as hydrochloride, placebo 1 hr previously b) Peaks with same dose c) After 1 mg/kg IV as hydrochloride, 300 mg cimetidine 1 hr previously d) Peaks with same dose Effect of cimetidine on lidocaine disposition significantly different from placebo. Healthy 20-42 yr olds COMPARATIVE EVALUATIONS; BLOOD PLASMA; DRUG INTERACTION; ADULTS; DRUGS	Feely, J. Wilkinson, G.R. McAllister, C.B. Wood, A.J.J. 1982 Annals of Internal Medicine 96:592-594

2H-1,2,4-Benzothiadiazine-7-sulfonamide, 3,4-dihydro-3-(phenylmethyl)-6-(trifluoromethyl)-, 1,1-dioxide
73-48-3
C15-H14-F3-N3-O4-S2
MW 421.41, MP 221-223 C, also reported as 226-227 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0893 Blood, plasma	Ingestion	TLC Fluorometry	13	a) 9.4-21.9 ug/l b) 15.7-36.0 ug/l c) 34.0-56.3 ug/l d) Not given e) Not given	a) 15.4 +or- 4.0 ug/l b) 27.2 +or- 7.9 ug/l c) 46.6 +or- 9.1 ug/l d) 10.5 +or- 3.9 ug/l e) 16.1 +or- 2.7 ug/l S.E.	a) 1.9 +or- 0.6 hr after 2.5 mg, 6 subjects b) 2.0 +or- 1.4 hr after 5 mg, 6 subjects in a) c) 2.4 +or- 1.2 hr after 10 mg, 6 subjects in a) d) 2.9 +or- 1.2 hr after 2.5 mg drug, 40 mg propranolol, 25 mg hydralazine, 7 subjects e) 2.8 +or- 1.1 hr after 2.5 mg, drug alone, 7 subjects in d) Peaks Healthy 20-34 yr olds, wt 53-78 kg GERMANY; ADULTS; BLOOD PLASMA; URINE; ANTIHYPERTENSIVE AGENTS; DIURETICS; DRUG INTERACTION; HUMAN	Schafer-Korting, M. Hutschler, E. 1982 European Journal of Clinical Pharmacology 21:319-323
0894 Urine	Ingestion	TLC Fluorometry	13	a) 0.26-0.63 mg b) 0.82-1.61 mg c) 1.64-2.53 mg d) Not given e) Not given	a) 45 +or- 0.13 mg b) 1.07 +or- 0.23 mg c) 1.95 +or- 0.32 mg S.E. d) 20.6 +or- 10.0% of dose e) 21.3 +or- 12.0% of dose S.E. a)-c)	a) After 2.5 mg, 6 cases b) After 5 mg, 6 cases, in a) c) After 10 mg, 6 cases in a) d) After fixed combination of 2.5 mg drug, 40 mg propranolol and 25 mg hydralazine, 7 cases e) After 2.5 mg drug alone, 7 cases in d) Cumulative excretion (0-72 hr) Healthy 20-30 yr olds, wt 53-78 kg GERMANY; ADULTS; BLOOD PLASMA; URINE; ANTIHYPERTENSIVE AGENTS; DIURETICS; DRUG INTERACTION; HUMAN	Schafer-Korting, M. Hutschler, E. 1982 European Journal of Clinical Pharmacology 21:319-323

2H-1,2,4-Benzothiadiazine-7-sulfonamide, 3,4-dihydro-6-(trifluoromethyl)-, 1,1-dioxide
135-09-1
C8-H8-F3-N3-O4-S2
MW 331.29, MP 272-273 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0195 Urine		TLC	17	a) 42.2-89.2% b) 42.2-82.6% c) 53.5-89.6% d) 40.0-93.5% e) 39.8-74.7% f) 46.4-66.3% g) 39.5-75.6% h) 32.6-67.7% % of dose	a) 56.7 +or- 18.6% b) 56.7 +or- 16.6% c) 65.6 +or- 13.7% d) 62.9 +or- 20.0% e) 53.2 +or- 13.4% f) 53.3 +or- 8.1% g) 56.7 +or- 15.9% h) 52.6 +or- 14.2% of dose	a) 75 mg/d, day 1 b) 75 mg/d, day 2 c) 75 mg/d, day 3 d) 75 mg/d, day 4 e) 150 mg/d, day 1 f) 150 mg/d, day 2 g) 150 mg/d, day 3 h) 150 mg/d, day 4 6 patients in a)-d), 7 in e)-h). No significant differences. Congestive heart failure patient receiving digitalis URINE; DIURETICS; COMPARATIVE EVALUATIONS; ADULTS; HEART DISEASES	Beers, O. 1983 Acta Pharmacologica et Toxicologica 51:177-181

2H-1,2,4-Benzothiadiazine-7-sulfonamide, 6-chloro-, 1,1-dioxide
58-94-6
C7-H6-Cl-N3-O4-S2
MW 295.74, MP 342.5-343 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0196 Blood, plasma	Ingestion	HPLC	9	a) 650-12 ng/ml b) 450-10 ng/ml c) 950-12 ng/ml	a) Not given b) Not given c) Not given	a) 2.5 and 48 hr after 2 250 mg tablets with 250 ml water after overnight fast. Initial measurement 225 ng/ml at 0.5 hr b) 2.5 and 48 hr after 2 250 mg tablets with 20 ml water after overnight fast. Initial measurement 105 ng/ml at 0.5 hr c) 2.5 and 48 hr after 2 250 mg tablets with 250 ml water after standard breakfast. Initial measurement 110 ng/ml at 0.5 hr Rapid decline from peak to 10-12 hr and slow decline to 96 hr. Estimated from graph. Healthy 22-32 yr olds, wt 62-88 kg BIOAVAILABILITY; BLOOD PLASMA; URINE; DIURETICS; COMPARATIVE EVALUATIONS; ADULTS	Walling, F.A. Barbhaiya, R.H. 1982 Journal of Pharmaceutical Sciences 71(1):33-36

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2H-1,2,4-Benzothiadiazine-7-sulfonamide, 6-chloro-, 1,1-dioxide
58-94-6
C7-H8-Cl-N3-O4-S2
MW 269.70, MP 343.5-343 C (decomp)

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0087 Urine	Ingestion	HPLC	9	a) 690-45 ng/ml b) 650-42 ng/ml c) 1500-45 ng/ml	a) Not given b) Not given c) Not given	a) 2.5 and 43 hr after 2 250 mg tablets with 250 ml water after overnight fast b) 6 and 43 hr after 2 250 mg tablets with 20 ml water after overnight fast. Initial measurement 600 ng/ml at 2.5 hr c) 6 and 42 hr after 2 250 mg tablets with 250 ml water after standard breakfast. Initial measurement 980 ng/ml at 2.5 hr Estimated from graph. Recovery values significantly higher in c). Healthy 22-33 yr olds, wt 62-80 kg BIOAVAILABILITY; BLOOD PLASMA; URINE; DIURETICS; COMPARATIVE EVALUATIONS; ADULTS	Welling, P.A. Barkhaiya, R.H. 1982 Journal of Pharmaceutical Sciences 71(1):32-35

2H-1,2,4-Benzothiadiazine-7-sulfonamide, 6-chloro-3,4-dihydro-,1,1-dioxide
58-93-5
C7-H8-Cl-N3-O4-S2
MW 297.72, MP 273-275 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0598 Blood	Ingestion	HPLC	1	630-35 ng/ml	Not applicable	5 and 24 hr after 50 mg daily dose. <20 ng/ml at 0 hr (7 AM) Estimated from graph Hypertensive 30 yr old lactating mother BLOOD; BLOOD SERUM; MILK; ANTIHYPERTENSIVE AGENTS; DRUG THERAPY; DRUGS; LACTATION	Miller, M.H. Cohn, R.D. Burghart, P.H. 1982 Journal of Pediatrics 101(5):789-791
0599 Blood, plasma	Ingestion	HPLC	1	Not given	2.5 ug/ml	14 hr after 6.5 g. 22 g chlorpropamide and 22 mg digoxin ingested simultaneously with hydrochlorothiazide. 19 yr old, overdose Sinus bradycardia 35-45 beats/min with T-wave inversion. ADOLESCENTS; ADULTS; SUICIDE; BLOOD PLASMA; DRUG ABUSE	Weatherall, R.C. Gross, P.T. Kanick, S. Donan, H. 1981 Journal of Analytical Toxicology 5:287-291

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2H-1,2,4-Benzothiadiazine-7-sulfonamide, 6-chloro-3,4-dihydro-,1,1-dioxide
58-93-5
C7-H8-Cl-N3-O4-S2
MW 297.72, MP 273-275 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0660 Blood, plasma	Ingestion	HPLC	10	a) Not given b) Not given c) Not given d) Not given	a) 1.10 +or- 0.16 mg/l x hr b) 2.05 +or- 0.41 mg/l x hr c) 1.04 +or- 0.22 mg/l x hr d) 1.96 +or- 0.35 mg/l x hr	a) After 50 mg b) After 100 mg c) After 50 mg + 25 mg indomethacin/6 hr, 11 doses d) After 100 mg + 25 mg indomethacin/6 hr, 11 doses Area under concentration-time curve data. No significant influence of indomethacin on hydrochlorothiazide absorption, disposition. Healthy 28-35 yr olds, wt 66-90 kg Addition of indomethacin to dose increased urine volume, Na and Cl elimination ADULTS; BLOOD PLASMA; URINE; COMPARATIVE EVALUATIONS; DIURETICS	Williams, R.L. Davies, R.O. Beeman, R.E. Holmes, G.I. Huber, P. Goo, W.L. Lin, E.T. Benet, L.B. 1983 Journal of Clinical Pharmacology 23:32-41
0661 Blood, serum	Ingestion	HPLC	1	200-20 ng/ml	Not applicable	3 hr and 24 hr after 50 mg daily dose. (20 ng/ml at 0 hr (7 AM) Estimated from graph. BLOOD; BLOOD SERUM; MILK; ANTIHYPERTENSIVE AGENTS; DRUG THERAPY; DRUGS; LACTATION	Miller, M.D. Cohn, E.D. Burghart, P.H. 1983 Journal of Pediatrics 101(5):788-791
0662 Milk	Ingestion	HPLC	1	50-110 ng/ml	Not applicable	1 hr before and 5 hr after 50 mg daily dose. Level returned to about 50 ng/ml after 24 hr Estimated from graph Blood specimens from 28 day old breast feeding infant (3.8 kg) showed no detectable hydrochlorothiazide (<26 ng/ml). Hypertensive 28 yr old lactating mother BLOOD; BLOOD SERUM; MILK; ANTIHYPERTENSIVE AGENTS; DRUG THERAPY; DRUGS; LACTATION	Miller, M.D. Cohn, E.D. Burghart, P.H. 1983 Journal of Pediatrics 101(5):788-791

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2H-1,2,6-Oxathiadiazine-7-sulfonamide, 6-chloro-3,4-dihydro-,1,1-dioxide
59-51-8
C7-H8-Cl-N3-O5-S2
MW 297.73, MP 273-276 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0403 Urine	Ingestion	HPLC	10	a) Not given b) Not given c) Not given d) Not given	a) 63.1 +or- 9.8% b) 53.7 +or- 7.5% c) 56.5 +or- 7.5% d) 51.3 +or- 7.8% % of dose	a) After 50 mg b) After 100 mg c) After 50 mg + 25 mg indomethacin/6 hr, 11 doses d) After 100 mg + 25 mg indomethacin/6 hr 11 doses Area under concentration-time curve data. No significant influence of indomethacin on hydrochlorothiazide absorption and disposition. Healthy 20-31 yr olds, wt 68-99 kg Addition of indomethacin to dose increased urine volume, Na and Cl elimination ADULTS; BLOOD PLASMA; URINE; COMPARATIVE EVALUATIONS; DIURETICS	Williams, R.L. Davies, R.O. Duncan, B.E. Holmes, G.I. Huber, P. Gee, W.L. Lin, E.T. Benet, L.E. 1982 Journal of Clinical Pharmacology 22:32-41

2H-1,3,2-Oxazaphosphorine, 2-(bis(2-chloroethyl)amino)tetrahydro-, 2-oxide (8 CI)
2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide (9 CI)
50-18-0
C7-H15-Cl2-N2-O2-P
MW 261.11

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0404 Blood, plasma	Injection	GC/MS	3	a) Not given b) Not given c) Not given	a) 69.3 ug/ml X hr b) 119.4 ug/ml X hr c) 488.1 ug/ml X hr	a) 320 mg. Also taking adriamycin, cisplatin b) 1100 mg. Also taking dacarbazine, C. parvum c) 860 mg, also taking adriamycin, cisplatin Area under the curve data Plasma:saliva ratios constant 27-52 yr old cancer patients, University of Cincinnati Hospital, OH OHIO; ADULTS; CASE HISTORIES; NEOPLASMS; BLOOD PLASMA; DRUG THERAPY; COMPARATIVE EVALUATIONS; SALIVA; DRUGS	Ritchel, W.A. Hyhadi, G. Herman, E.J. Clinton, E.J. Benton, D. 1981 Journal of Clinical Pharmacology 21:461-465

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2H-1,3,2-Oxazaphosphorine, 2-[bis(2-chloroethyl)amino]tetrahydro-, 2-oxide (8 CI)
2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide (9 CI)
50-18-0
C7-H15-Cl2-N2-O2-P
MW 261.11

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8605 Blood, plasma		GC/MS	1	a) 70-21 ug/ml b) 2.3-1.2 ug/ml c) 5.3-1.1 ug/ml	a) Not given b) Not given c) Not given	a) Cyclophosphamide, 1.5 and 10 hr after dose b) Phosphoramide mustard (metabolite), 2.5 and 10 hr after dose. Initially, 1.3 ug/ml c) Nornitrogen mustard (metabolite), 1.5 and 2.5 hr after dose. Finally, 1.5 ug/ml at 10 hr Dose: 1.5 IV of 60 mg/kg (4380 mg) cyclophosphamide. Data also for other patients. 47 yr old with lung carcinoma CARCINOMAS; BLOOD PLASMA; URINE; DOSES; MEASUREMENT METHODS; METABOLITES	Jardine, I. Fenselau, C. Appler, H. Kan, H.-H. Brundett, R.B. Colvin, M. 1978 Cancer Research 38:488-418
8606 Urine	Injection	GC/MS	3	2.0-5.6 mmol b) 0.2-0.4 mmol c) 1.0-2.6 mmol	a) Not given b) Not given c) Not given	a) Cyclophosphamide b) Phosphoramide mustard (metabolite) c) Nornitrogen mustard (metabolite) Excretions during 24 hr after 60 or 75 mg/kg cyclophosphamide 16, 45 and 62 yr olds with lung carcinoma or myelocytic leukemia CARCINOMAS; BLOOD PLASMA; URINE; DOSES; MEASUREMENT METHODS; METABOLITES	Jardine, I. Fenselau, C. Appler, H. Kan, H.-H. Brundett, RB.B. Colvin, M. 1978 Cancer Research 38:488-418

2H-1,4-Benzodiazepin-2-one, 7-chloro-1,3-dihydro-1-methyl-5-phenyl-
439-14-5
C16-H13-Cl-N2-O
MW 284.74, MP 125-126 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8607 Blood, plasma	Injection	GC	15	a) 360-30 ng/ml b) 450-15 ng/ml	a) Not given b) Not given	a) 0 and 7 hr after 10 mg dose, oral contraceptive users b) 0 and 4 hr after 10 mg dose, controls Estimated from graph Apparent elimination half life significantly longer, total metabolic clearance significantly less in a) Healthy controls and subjects on low dose estrogen-containing contraceptives for > 3 months BLOOD PLASMA; COMPARATIVE EVALUATIONS; ORAL CONTRACEPTIVES; ADULTS; DIAZEPAM; DRUGS	Abernethy, D.R. Greenblatt, D.J. Divoll, M. Arendt, R. Ochs, H.R. Shader, R.I. 1983 New England Journal of Medicine 306(13):791-792
8608 Blood, plasma	Ingestion	GC-EC	10	a) 170-80 ng/ml b) 150-260 ng/ml c) 200-420 ng/ml	a) Not given b) Not given c) Not given	a) 60 and 240 min after 0.07 mg/kg. Initial measurement at 20 min, 110 ng/ml b) 20 and 60 min after 0.14 mg/kg. Final measurement at at 240 min, 160 ng/ml c) 20 and 120 min after 0.28 mg/kg. Final measurement at 240 min, 320 ng/ml Estimated from graph Diazepam plus N-desmethyldiazepam (metabolite with 50% of diazepam activity). Peak impairment of psychomotor tasks at 20 min with blood levels less than two-thirds eventual plateau. Healthy 21-36 yr olds, within 10% of ideal ht/wt ratios ADULTS; BLOOD; BLOOD PLASMA; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; TRANQUILIZERS; ALCOHOLS; DIAZEPAM; ALCOHOLIC BEVERAGES; METABOLITES	Ellinwood, E.H. Linnoila, M. Hesler, N.E. Holter, D.W. 1981 Clinical Pharmacology and Therapeutics 30(4):534-538

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2H-1,4-Benzodiazepin-2-one, 7-chloro-1,3-dihydro-1-methyl-5-phenyl-
439-14-5
C16-H13-Cl-N2-O
MW 280.76, MP 125-126 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8469 Blood, serum						Review. Assessment of clinical use of laboratory determinations for metals, anticonvulsive agents, and cardiovascular drugs. ADULTS; AGE; CHILDREN; ANEMIA; BONE DISEASES; DISEASES; MENTAL RETARDATION; METAL POISONING; NUTRITIONAL DEFICIENCIES; SKIN DISEASES; BLOOD; BLOOD PLASMA; BLOOD SERUM; LIVER; URINE; ANTIARRHYTHMIC AGENTS; ANTICONVULSANTS; DIURETICS; DRUG THERAPY; DRUGS; HYPNOTICS; MUSCLE RELAXANTS; SEDATIVES; TRANQUILIZERS; REVIEW; COPPER; DIAZEPAM; IRON; LEAD; LITHIUM; THEOPHYLLINES; ZINC; PAINTS	Weiss, E.B. Rosenthal, I.M. 1978 Journal of Analytical Toxicology 2:166-171

2H-1,4-Benzodiazepin-2-one, 7-chloro-1,3-dihydro-3-hydroxy-1-methyl-5-phenyl-
846-49-4
C16-H13-Cl-N2-O2
MW 300.76

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8616 Blood			1	Not applicable	0.16 mg/l	Overdose of Informin (2500 mg), temazepam dose unknown 43 yr old patient Unconsciousness, areflexia, respiratory depression, metabolic acidosis, hypotension, tachycardia, coma, convulsions, bradyarrhythmia, cardiac arrest, death ACIDOSIS; ADULTS; SUICIDE; HYPERTENSION; BLOOD; ANTIHYPERTENSIVE AGENTS; DRUG ABUSE; DRUGS; LIVER; ALCOHOLS; DIAZEPAM	Hunter, R. 1982 British Medical Journal 285:1011

2H-1,4-Benzodiazepin-2-one, 7-chloro-1,3-dihydro-3-hydroxy-5-phenyl-
604-75-1
C15-H11-Cl-N2-O2
MW 286.70, MP 205-206 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0611 Blood	Ingestion	GC	25	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 526 +or- 67 ng/ml b) 16 +or- 1 ng/ml c) 271 +or- 77 ng/ml d) 17 +or- 1 ng/ml e) 250 +or- 31 ng/ml f) 6.2 +or- 0.9 ng/ml	a) Total, bound and unbound. 13 subjects with normal renal function b) Unbound. 8 normal subjects c) Total, bound and unbound. 8 patients with renal impairment d) Same subjects as c) e) Total bound and unbound. 4 patients on hemodialysis f) Unbound same subjects e) Peaks after 30 mg. No correlation with age. Mean age and wt ranges, 38-52 yrs, 64-69 kg BLOOD; DRUG THERAPY; DRUGS; SEDATIVES; TRANQUILIZERS; METABOLITES	Murray, T.G. Chiang, S.T. Koepke, H.R. Walker, B.R. 1981 Clinical Pharmacology and Therapeutics 30(6):885-889
0612 Blood			1	Not applicable	0.03 mg/l	Overdose of indoramin (2500 mg), oxazepam dose unknown 43 yr old patient Unconsciousness, areflexia, respiratory depression, metabolic acidosis, hypotension tachycardia, coma, convulsions, bradyarrhythmia, cardiac arrest, death SCOTLAND; ADULTS; SUICIDE; HYPERTENSION; BLOOD; ANTIHYPERTENSIVE AGENTS; DRUG ABUSE; DRUGS; LAVAGE; ALCOHOLS; DIAZEPAM	Hunter, R. 1982 British Medical Journal 285:1811
0613 Blood, plasma	Ingestion	GC-RC	a) 14 b) 1?	a) Not given b) Not given	7.0-400 ng/ml	a) Initially and 2 hr after 30 mg oral. Low dose ethinyl estradiol (50 ug or less) at least 3 months before study Estimated from graph Healthy 19-37 yr olds, mean wt 56.0 + or -1.3 kg BLOOD PLASMA; ORAL CONTRACEPTIVES; ADULTS; DRUGS	Abernethy, D.R. Greenblatt, D.J. Ochs, H.R. Weyers, D. Divoll, M. Harmatz, J.S. Shader, R.I. 1982 Clinical Pharmacology and Therapeutics 33(5):628-632

3-Heptanone, 6-(dimethylamino)-4,4-diphenyl-
76-99-3
C21-H27-N-O
MW 309.49

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0614 Blood	Ingestion	GC	1	a) 98-48 ng/ml b) 90-52 ng/ml c) 100-42 ng/ml d) 8.0-2.9 ng/ml e) 5.5-2.5 ng/ml f) 5.4-3.1 ng/ml	a) Not given b) Not given c) Not given	a) 2 and 24 hr after daily dose. Initially, 60 ng/ml b) 2 and 24 hr after daily dose plus 0.3 mg/kg diazepam, 9 days. Initially, 90 ng/ml c) 2 and 24 hr after daily dose, after last diazepam dose. Initially, 75 ng/ml d) Pyrrolidine metabolite 2 and 24 hr after daily dose. Initially, 3.1 ng/ml e) Pyrrolidine metabolite 2 and 24 hr after daily dose plus 0.3 mg/kg diazepam, 9 days. Initially, 4.5 ng/ml f) Pyrrolidine metabolite 2 and 24 hr after daily dose, after last diazepam dose. Initially, 3.5 ng/ml Estimated from graphs Methadone metabolism not significantly inhibited by diazepam Outpatient in maintenance program San Francisco General Hospital Medical Center. daily dose of methadone for at least 1 mo BLOOD; DRUG ABUSE; DRUG INTERACTION; DRUG THERAPY; DIAZEPAM; METABOLITES; CALIFORNIA	Pond, S.M. Tong, T.G. Benowitz, N.L. Jacob, P., III Rigod, J. 1982 Clinical Pharmacology and Therapeutics 31(2):139-143
0615 Blood	Injection Ingestion	GC	a) 11 b) 22 c) 10	a) 0-0.25 mg% b) 0-3.6 mg% c) Not detected-0.12 mg%	a) Not given b) Not given c) Not given	a) Death following IV injection b) Death following ingestion c) Controls, death by other causes Autopsies BLOOD; URINE; DRUG ABUSE; DEATHS; FORENSIC MEDICINE; AUTOPSIES; CASE HISTORIES	Segal, R.J. Catherman, R.L. 1974 Journal of Forensic Sciences 19(1):64-71

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3-Heptanone, 6-(dimethylamino)-4,4-diphenyl-
76-99-3
C21-H27-N-O
MW 309.45

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0616 Blood, plasma	Ingestion	GC	a) 5 b) 3	a) 245-60 ng/ml b) 100-140 ng/ml	a) Not given b) Not given	a) 8 and 72 hr after 50 mg. Initial measurement and 24 hr, 160 ng/ml. Transient rise to 120 ng/ml after 60 mg levo-alpha-acetylmethadol (LAAM) given at 24 hr. Dose, 50 mg/day methadone for 90 days b) 8 and 12 hr after 50 mg. 170 ng/ml at 2 hr. Dose 72 hr after final (30th) oral dose (85 mg 3x/week) of levo-alpha-acetylmethadol Estimated from graph. Opiate addicts, CA CALIFORNIA; ADULTS; BLOOD PLASMA; ANALGESICS; DRUG INTERACTION; DRUG THERAPY; DRUGS; NARCOTICS; URINE; METABOLITES	Henderson, G.L. Wilson, B.E. Lee, D.H.H. 1977 Clinical Pharmacology and Therapeutics 21(1):16-25
0617 Urine	Injection Ingestion	GC	a) 11 b) 22 c) 18	a) 0-0.93 mg% b) 0.1-0.63 mg% c) <0.006-0.56 mg%	a) Not given b) Not given c) Not given	a) Death following IV injection b) Death following ingestion c) Controls, death by other causes Autopsies BLOOD; URINE; DRUG ABUSE; DRUGS; FORENSIC MEDICINE; AUTOPSIES; CASE HISTORIES	Segal, B.J. Catherman, R.L. 1974 Journal of Forensic Sciences 19(1):64-71
0618 Urine	Ingestion	GC	5	4-20% of dose	Not given	72 hr excretion after 5C mg. 50 mg/day for 90 days prior to dose 21-46 yr old methadone patient. CALIFORNIA; ADULTS; BLOOD PLASMA; ANALGESICS; DRUG INTERACTION; DRUG THERAPY; DRUGS; NARCOTICS; URINE; METABOLITES	Henderson, G.L. Wilson, B.E. Lee, D.H.H. 1977 Clinical Pharmacology and Therapeutics 21(1):16-25

3-Heptanone, 6-(dimethylamino)-4,4-diphenyl-, (R)-
125-58-6
C21-H27-N-O
MW 309.46, MP 99-100 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0619 Blood, plasma	Ingestion	GC/MS	a) 1 b) 1	a) 12-110 ng/g b) 4-70 ng/g	a) Not given b) Not given	a) About 1 and 3 hr after 80 mg. Final measurement 13 ng/g at 120 hr b) About 1 and 3 hr after 100 mg. Final measurement 10 ng/g at 120 hr Pharmacologically active levo enantiomer 24 and 37 yr old methadone patients BLOOD PLASMA; URINE; DRUGS; NARCOTICS; COMPARATIVE EVALUATIONS	Nakamura, K. Hadley, D.L. Enoch, M.J. Irving, C.S. Klein, P.D. 1982 Journal of Pharmaceutical Sciences 71(1):40-43
0620 Urine	Ingestion	GC/MS	1	Not applicable	9.8% of dose	168 hr cumulative excretion after 80 mg 24 yr old methadone patient BLOOD PLASMA; URINE; DRUGS; NARCOTICS; COMPARATIVE EVALUATIONS	Nakamura, K. Hadley, D.L. Enoch, M.J. Irving, C.S. Klein, P.D. 1982 Journal of Pharmaceutical Sciences 71(1):40-43

3-Heptanone, 6-(dimethylamino)-4,4-diphenyl-, (S)-
5653-88-5
C21-H27-N-O
MW 309.39

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0621 Blood, plasma	Ingestion	GC/MS	a) 1 b) 1	a) 180-8 ng/g b) 130-5 ng/g	a) Not given b) Not given	a) About 3 and 120 hr after 80 mg. Initial measurement 30 ng/g at about 1 hr b) About 3 and 120 hr after 100 mg. Initial measurement 30 ng/g at about 1 hr Pharmacologically inactive dextro enantiomer. 24 and 37 yr old methadone patients BLOOD PLASMA; URINE; DRUGS; NARCOTICS; COMPARATIVE EVALUATIONS	Nakamura, K. Hadley, D.L. Enoch, M.J. Irving, C.S. Klein, P.D. 1982 Journal of Pharmaceutical Sciences 71(1):40-43

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3-Heptanone, 6-(dimethylamino)-4,6-diphenyl-, (S)-
9063-00-5
C21-H27-N-O
MW 309.39

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0622 Urine	Ingestion	GC/MS	1	Not given	9.2% of dose	168 hr cumulative excretion after 80 mg 24 yr old methadone patient BLOOD PLASMA; URINE; HUMAN; NARCOTICS; COMPARATIVE EVALUATIONS	Nakamura, K. Hanbay, D.L. Brook, M.J. Irving, C.S. Klein, P.D. 1982 Journal of Pharmaceutical Sciences 71(1):40-43

3,5-Pyrazolidinedione, 1,2-diphenyl-4-(2-(phenylsulfinyl)ethyl)-
57-96-5
C23-H20-N2-O3-S
MW 404.48, MP 136-137 C (dl form)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0623 Blood, plasma	Ingestion	HPLC	6	a) 6.05-17.04 ug/ml b) 0.21-1.07 ug/ml c) 0.10-0.48 ug/ml d) 0.61-0.92 ug/ml	a) 12.97 +or- 4.10 ug/ml b) Not given c) Not given d) 2.60 +or- 3.58 ug/ml	a) 144 +or- 60 min b) Sulfone metabolite 250 +or- 120 min c) p-Hydroxy metabolite 225 +or- 50 min sulfinpyrazone d) Sulfide metabolite 653 +or- 487 min Dosage: 200 mg. Postabsorptive biexponential decline in levels 22-24 yr olds ADULTS; BLOOD PLASMA; URINE; ANTICOAGULANTS; COMPARATIVE EVALUATIONS; HUMAN	Mahony, C. Wolfram, K.H. Nash, P.V. Bjornsson, T.D. 1983 Clinical Pharmacology and Therapeutics 33(4):491-497
0624 Urine	Ingestion	HPLC	6	a) 0.05-0.34% of dose b) 40-160% of dose	a) 0.23% of dose b) 56 +or- 22% of dose	a) % unchanged drug b) % parent drug and metabolites Dose: 200 mg 22-24 yr olds ADULTS; BLOOD PLASMA; URINE; ANTICOAGULANTS; COMPARATIVE EVALUATIONS; HUMAN	Mahony, C. Wolfram, K.H. Nash, P.V. Bjornsson, T.D. 1983 Clinical Pharmacology and Therapeutics 33(4):491-497

3,5-Pyrazolidinedione, 4-butyl-1,2-diphenyl-
50-33-9
C19-H20-N2-O2
MW 308.37, MP 105 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0625 Blood, plasma	Ingestion	HPLC GC/MS	6	a) Not given b) Not given c) Not given d) Not given	a) 35.96 ug/ml b) 38.5 ug/ml c) 6.6 ug/ml d) 3.6 ug/ml	a) Peak, 4 hr after 426 mg oxibutazone b) Peak, 4 hr after 300 mg phenylbutazone c) Oxyphenbutazone, metabolite, peak after 300 mg phenylbutazone d) Oxyphenbutazone, 168 hr after 300 mg phenylbutazone Values in c), d) estimated from graph 25-35 yr old volunteers, wt 54-68 kg BLOOD PLASMA; URINE; ANTI-INFLAMMATORY AGENTS; DRUGS; ADULTS; METABOLISM; METABOLITES	Yasuda, T. Shindo, T. Hitani, M. Ishida, H. Ono, F. Kageyama, T. 1982 Journal of Pharmaceutical Sciences 71(5):568-572
0626 Urine	Ingestion	HPLC GC/MS	6	a) Not given b) Not given c) Not given d) Not given	a) 1.20% of dose b) 0.95% of dose c) 0.63% of dose d) 0.16% of dose	a) Phenylbutazone, 0-168 hr after 300 mg phenylbutazone b) O-phenylbutazone, 0-168 hr after 300 mg phenylbutazone c) Oxyphenbutazone, 0-168 hr after 300 mg phenylbutazone d) Gamma-hydroxyphenylbutazone, 0-24 hr after 300 mg phenylbutazone 25-35 yr old volunteers, wt 54-68 kg BLOOD PLASMA; URINE; ANTI-INFLAMMATORY AGENTS; DRUGS; ADULTS; METABOLISM; METABOLITES	Yasuda, T. Shindo, T. Hitani, M. Ishida, H. Ono, F. Kageyama, T. 1982 Journal of Pharmaceutical Sciences 71(5):569-572

3'H-Cyclopropa(6,7)pregna-4,6-diene-21-carboxylic acid, 6,7-dihydro-17-hydroxy-3-oxo-, monopotassium salt, (6alpha,7alpha,17alpha)-
60047-97-8
C23-H32-04.K
MW 411.58

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8627 Blood, plasma	Ingestion	RIA	12	a) 98-475 ng/ml b) 100-450 ng/ml c) 25-120 ng/ml d) 25-110 ng/ml	a) Not given b) Not given c) Not given d) Not given	a) Initial level and 2 hr after 9th dose of 40 mg/day. 200 ng/ml at 0 hr b) Initial level and 2 hr after 10th dose of 40 mg/day. 200 ng/ml at 0 hr c) Initial level and 2 hr after 9th dose of 10 mg/day. 50 ng/ml at 0 hr d) Initial level and 2 hr after 10th dose of 10 mg/day. 50 ng/ml at 0 hr Estimated from graph. Administered as K-salt Healthy 18-35 yr olds DIURETICS; CORTICOSTEROIDS; BLOOD PLASMA; KIDNEYS; URINE; DRUGS; COMPARATIVE EVALUATIONS; ADULTS; METABOLITES	McInnes, G.T. Shelton, J.R. Harrison, I.R. Perkins, R.M. Palmer, R.F. 1982 British Journal of Clinical Pharmacology 13:187-194

4(3H)-Quinazolinone, 2-methyl-3-o-tolyl- (8 CI)
4(3H)-Quinazolinone, 2-methyl-3-(2-methylphenyl)- (9 CI)
72-44-6
C16-H14-N2-O
MW 250.29, MP 120 C, also given as 114-116 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8620 Urine	Ingestion	RIA	1	9.7-10.4 mg Eq/l	Not given	After 300 mg dose. Hydrolyzed samples. Unhydrolyzed samples had 2.4-3.6 mg Eq/l. Range for dilutions of 30 and 100 fold. URINE; DRUGS; NARCOTICS; MEASUREMENT METHODS	Berman, A.R. McGrath, J.P. Pernicone, R.C. Colla, J.A. 1975 Clinical Chemistry 21(13):1878-1881

4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 3,3-dimethyl-7-oxo-6-(2-phenylacetamido)-, compd. with N,N'-dibenzylethylenediamine (2:1) (9 CI)
4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 3,3-dimethyl-7-oxo-6-((phenylacetyl)amino)- (2S-(2alpha,5alpha,6beta))-, compd. with N,N'-bis(phenylmethyl)-1,2-ethanediamine (2:1) (9 CI)
1538-09-6
C16-H20-N2.2C16-H18-N2-O4-S
MW 969.11, MP 123-124 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0629 Blood, serum	Injection	Immunodiffusion	a) 10 b) 8 c) 9 d) 6	a) 0.17-0.52 U/ml b) 0.21-0.70 U/ml c) 0.38-1.50 U/ml d) 0.67 1.85 U/ml	a) 0.32 U/ml b) 0.41 U/ml c) 0.75 U/ml d) 1.00 U/ml	a) 2.4 million units IM, weekly b) 2.4 million units IM, weekly, 500 mg probenecid, oral, 4X/day c) 4.0 million units IM, weekly d) 4.0 million units IM, 500 mg probenecid, oral, 4X/day. Treatment for 3 wk. Sampled 7 days after 3rd injection. Cerebrospinal fluid, measured after 3rd injection, <0.03 U/ml in 31 cases, 0.04 and 0.06 U/ml in 2 cases from group d). Patients positive for latent syphilis, 18-40 yr old. Vague sensation of light-headedness and malaise in probenecid recipients VENEREAL DISEASES; ADULTS; DISEASES; BLOOD SERUM; CEREBROSPINAL FLUID; ANTIBIOTICS; DRUG THERAPY; DRUGS; PENICILLAMINE	Bucan, J. Robson, H.G. 1961 Journal of the American Medical Association 206(12):2583
0630 Cerebrospinal fluid	Injection	Immunodiffusion	a) 31 b) 2	a) Not given b) 0.04-0.06 U/ml	a) <0.03 U/ml b) Not given	a) 2.4 or 4.0 million units IM, weekly, 18 subjects also given 500 mg probenecid, oral, 4X/day b) 4.0 million units IM weekly, plus 500 mg probenecid, oral, 4X/day. Serum levels 0.63-1.85 U/ml Treatment for 3 wk. Adequate CSF level, 0.03 U/ml. Serum measured 7 days after each injection. Cerebrospinal fluid measured after last injection. Patients positive for latent syphilis, 18-40 yr old. Vague sensation of light-headedness and malaise in probenecid recipients VENEREAL DISEASES; ADULTS; DISEASES; BLOOD SERUM; CEREBROSPINAL FLUID; ANTIBIOTICS; DRUG THERAPY; DRUGS; PENICILLAMINE	Bucan, J. Robson, H.G. 1961 Journal of the American Medical Association 206(12):2583

6-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 6-((((4-ethyl-2,3-dioxo-1-piperazinyl)carbonyl)amino)phenylacetyl)amino)-3,3-dimethyl-7-oxo-, (2S-(2alpha,5alpha,6beta(S*)))-
61377-96-1
C23-H27-N5-O7-S
MW 517.61

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0631 Blood, serum	Injection	Microbiological	8	a) 72.0-129.5 ug/ml b) 277.7-367.5 ug/ml c) 20.0-53.0 ug/ml d) 83.3-130.5 ug/ml e) 10.1-20.5 ug/ml f) 19.5-50.1 ug/ml	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.5 hr after IV of 2 g/6 hr b) 0.5 hr after IV of 4 g/6 hr c) 2.0 hr after IV of 2 g/6 hr d) 2.0 hr after IV of 4 g/6 hr e) 4.0 hr after IV of 2 g/6 hr f) 4.0 hr after IV of 4 g/6 hr Range of means, measured after AM dose. 50-70 yr olds (at 54-95 kg) hospitalised with acute bronchial infection SPUTUM; PENICILLIN; BRONCHIAL SECRETIONS; BLOOD SERUM; LUNGS; ANTIBIOTICS; AUSTRALIA; ADULTS; BRONCHITIS; DRUGS	Harlin, G.E. Burgess, K.R. Burgoyne, J. Funnell, G.R. Guinness, M.D.G. 1981 Thorax 36:776-780
0632 Bronchial mucosa	Injection	Microbiological	12	a) 5.7-57.2 ug/ml b) 6.3-76.7 ug/ml	a) 28.4 ug/ml b) 31.4 ug/ml	a) 6 patients, 4 doses of 2 g/6 hr, IV b) 6 patients, 4 doses of 4 g/6 hr, IV 50-80 yr olds (wt 43-82 kg) hospitalised with chronic bronchitis SPUTUM; PENICILLIN; BRONCHIAL SECRETIONS; BLOOD SERUM; LUNGS; ANTIBIOTICS; AUSTRALIA; ADULTS; BRONCHITIS; DRUGS	Harlin, G.E. Burgess, K.R. Burgoyne, J. Funnell, G.R. Guinness, M.D.G. 1981 Thorax 36:776-780
0633 Bronchial secretion s	Injection	Microbiological	12	a) 2.7-10.2 ug/ml b) 6.3-76.7 ug/ml	a) 5.8 ug/ml b) 31.4 ug/ml	a) 6 patients, 4 doses of 2 g/6 hr, IV b) 6 patients, 4 doses of 4 g/6 hr, IV 50-80 yr olds (wt 43-82 kg) hospitalised with chronic bronchitis SPUTUM; PENICILLIN; BRONCHIAL SECRETIONS; BLOOD SERUM; LUNGS; ANTIBIOTICS; AUSTRALIA; ADULTS; BRONCHITIS; DRUGS	Harlin, G.E. Burgess, K.R. Burgoyne, J. Funnell, G.R. Guinness, M.D.G. 1981 Thorax 36:776-780
0634 Pleural fluid	Injection	Microbiological	3	a) Not given b) Not given c) Not given	a) 10.0 ug/ml b) 20.6 ug/ml c) 77.2 ug/ml	a) After 4 doses of 2 g/6 hr, IV b) After 30 doses of 2 g/6 hr, IV c) After 8 doses of 2 g/6 hr, IV Chronic bronchitis patients SPUTUM; PENICILLIN; BRONCHIAL SECRETIONS; BLOOD SERUM; LUNGS; ANTIBIOTICS; AUSTRALIA; ADULTS; BRONCHITIS; DRUGS	Harlin, G.E. Burgess, K.R. Burgoyne, J. Funnell, G.R. Guinness, M.D.G. 1981 Thorax 36:776-780

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4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 6-((((((4-ethyl-2,3-dioxo-1-piperazinyl)carbonyl)amino)phenylacetyl)amino)-3,3-dimethyl-7-oxo-, (2S-(2alpha,5alpha,6beta(S*)))-
61477-96-1
C33-H37-N5-O7-S
MW 517.61

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0635 Sputum		Microbiological	8	a) 0.5-3.7 ug/ml b) 2.9-13.0 ug/ml c) 0.4-3.9 ug/ml d) 5.2-12.9 ug/ml e) 0-2.8 ug/ml f) 3.9-15.4 ug/ml	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.5 hr after IV of 2 g/6 hr b) 0.5 hr after IV of 4 g/6 hr c) 2.0 hr after IV of 2 g/6 hr d) 2.0 hr after IV of 4 g/6 hr e) 4.0 hr after IV of 2 g/6 hr f) 4.0 hr after IV of 4 g/6 hr Range of means, measured after AM dose 59-70 yr olds (wt 54-95 kg) hospitalized with chronic infections SPUTUM; PENICILLIN; BRONCHIAL SECRETIONS; BLOOD SERUM; LUNGS; ANTIBIOTICS; AUSTRALIA; ADULTS; BRONCHITIS; DRUGS	Marlin, G.E. Burgess, K.R. Burgoyne, J. Funnell, C.R. Guinness, M.D.G. 1981 Thorax 36:778-780

4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 6-(2-amino-2-phenylacetamido)-3,3-dimethyl-7-oxo, D-(-)- (8 CI)
4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 6-((aminophenylacetyl)amino)-3,3-dimethyl-7-oxo-, (2S-(2alpha,5alpha,6beta(S*)))- (8 CI)
69-53-4
C16-H19-N3-O4-S
MW 349.42

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0636 Blood, serum	Irrigation	Microbiological	10	a) 0.25-2.35 ug b) 0-1.25 ug c) 0.0.70 ug	a) 1.02 +or- 0.30 ug b) 0.57 +or- 0.12 ug c) 0.19 +or- 0.09 ug S.E.	a) 15 min, 10 cases b) 1 hr, 9 cases c) 2 hr, 6 cases Patients with detectable levels. After intraoperative irrigation with 2 g in 1000 ml normal saline 24.3 +or- 5.0 yr olds undergoing cesarean sections, Aug 1-Nov 30, 1981, UK Endomyometritis in 1 patient THIAS; INFECTION; BLOOD SERUM; URINE; ANTIBIOTICS; DRUGS; SURGERY; PHARMACT	Duff, P. Gibbs, R.S. Jorgensen, J.H. Alexander, E. 1982 Obstetrics and Gynecology 60(6):608-612

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6-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 6-(2-amino-2-phenylacetamido)-3,3-dimethyl-7-oxo, D-(-)- (8 CI)
6-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 6-((aminophenylacetyl)amino)-3,3-dimethyl-7-oxo-, (2S-(2alpha,5alpha,6beta(S*)))- (9 CI)
69-53-4
C16-H19-N3-O4-S
MW 349.41

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0637 Urine	Irrigation	Microbiological	10	28.5-217.5 ug/ml	105.22 +or- 23.32 ug/ml S.E.	1.2 +or- 0.2% of dose excreted within 2 hr after intraoperative irrigation with 2 g in 1000 ml normal saline 30.2 +or- 5.8 yr olds undergoing cesarean sections, Aug 1-Nov 30, 1981, TX Endomyometritis in 1 patient TEXAS; INFECTION; BLOOD SERUM; URINE; ANTIBIOTICS; DRUGS; SURGERY; PREGNANCY	Duff, P. Gibbs, R.S. Jorgensen, J.H. Alexander, C. 1983 Obstetrics and Gynecology 60(4):488-492

4,6(1H,5H)-Pyrimidinedione, 5-ethyldihydro-5-(1-methylbutyl)-2-thioxo-
76-75-5
C11-H18-N2-O2-S
MW 242.34, MP 159 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0638 Blood, serum	Injection	GC	1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable g) Not applicable h) Not applicable i) Not applicable j) Not applicable k) Not applicable l) Not applicable	a) 107.5 mg/l b) 97.7 mg/l c) 45.0 mg/l d) 66.0 mg/l e) 13.5 mg/l f) 3.1 mg/l g) 12.0 mg/l h) 9.9 mg/l i) 5.1 mg/l j) 6.7 mg/l k) 2.2 mg/l l) 2.1 mg/l	a) Day 2 b) Day 3 c) Day 4 d) Day 5 e) Day 8 f) Day 9 g) Day 2 h) Day 3 i) Day 4 j) Day 5 k) Day 8 l) Day 9 Levels of thiopentone in a)-f), pentobarbitone (metabolite) in g)-l), after continuous infusion of thiopentone, dose 1 g/hr for 3 hr, 1.5 g/hr for 24 hr, reduced over 4 days to 600 mg/hr, discontinued on day 6. Phenytoin, 500 mg followed by 100 mg 3X/day also given. Results in f), h), l) at limit of detection. 32 yr old with status epilepticus secondary to hypoxic brain damage, victim of boating accident, United Kingdom. Convulsive, deeply unconscious, unresponsive to pain, pupils reactive to light, other brain-stem reflexes absent UNITED KINGDOM; CENTRAL NERVOUS SYSTEM DISEASES; BLOOD SERUM; CEREBROSPINAL FLUID; ANTICONVULSANTS; DRUG THERAPY; HUMAN; HYPNOTICS; SEDATIVES; METABOLITES	Airey, I.L. Smith, P.A. Stoddart, J.C. 1982 Anaesthesia 37:328-331

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4,6(1H,5H)-Pyrimidinedione, 5-ethyldihydro-5-(1-methylbutyl)-2-thioxo-
76-75-5
C11-H18-N2-O2-S
MW 242.34, MP 159 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8639 Cerebrospinal fluid	Injection	GC	1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable g) Not applicable h) Not applicable	a) 15.2 mg/l b) 16.5 mg/l c) 2.6 mg/l d) 0.9 mg/l e) 2.9 mg/l f) 2.2 mg/l g) 0.9 mg/l h) 0.9 mg/l	a) Day 3 b) Day 5 c) Day 6 d) Day 9 e) Day 3 f) Day 5 g) Day 8 h) Day 9 Levels of thiopentonein a)-d), pentobarbitone (metabolite) in e)-h), after continuous infusion of thiopentone, dose 1 g/hr for 3 hr, 1.5 g/hr for 24 hr, reduced over 4 days to 600 mg/hr, discontinued on day 6. Phenytoin, 500 mg followed by 100 mg 3x/day also given. Results in c)-h) at limit of detection 32 yr old with status epilepticus secondary to hypoxic brain damage, victim of boating accident, United Kingdom. Convulsive, deeply unconscious, unresponsive to pain, pupils reactive to light, other brain-stem reflexes absent UNITED KINGDOM; CENTRAL NERVOUS SYSTEM DISEASES; BLOOD SERUM; CEREBROSPINAL FLUID; ANTICONVULSANTS; DRUG THERAPY; DRUGS; HYPNOTICS; SEDATIVES; METABOLITES	Airey, I.L. Smith, P.A. Stoddart, J.C. 1982 Anaesthesia 37:328-331

4,6(1H,5H)-Pyrimidinedione, 5-ethyldihydro-5-phenyl-
125-33-7
C12-H14-N2-O2
MW 218.25, MP 201-202 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8640 Blood, serum						Review. Assessment of clinical use of laboratory determinations for metals, anticonvulsive agents, and cardiovascular drugs. ADULTS; AGE; CHILDREN; ANEMIA; BONE DISEASES; DISEASES; MENTAL RETARDATION; METAL POISONING; NUTRITIONAL DEFICIENCIES; SKIN DISEASES; BLOOD; BLOOD PLASMA; BLOOD SERUM; LIVER; URINE; ANTIARRHYTHMIC AGENTS; ANTICONVULSANTS; DIURETICS; DRUG THERAPY; DRUGS; HYPNOTICS; MUSCLE RELAXANTS; SEDATIVES; TRANQUILIZERS; REVIEW; COPPER; DIAZEPAM; IRON; LEAD; LITHIUM; THIOPENTALINE; ZINC; PAINTS	Weiss, H.B. Rosenthal, I.M. 1978 Journal of Analytical Toxicology 2:166-171

4H-Imidazo(1,5-a)(1,4)benzodiazepine, 8-chloro-6-(2-fluorophenyl)-1-methyl
59467-70-8
C18-H13-Cl-F-N3
MW 325.76

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8641 Blood, plasma	Injection Ingestion	GC	6	a) 150-10 ng/ml b) 110-6 ng/ml c) 130-8 ng/ml d) 100-15 ng/ml e) 70-9 ng/ml f) 115-11 ng/ml	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) Initially and 7 hr after 0.075 mg/kg IV, A.M. dose, ambulant b) Initially and 7 hr after 0.075 mg/kg IV, A.M. dose, supine c) Initially and 7 hr after 0.075 mg/kg IV, P.M. dose, ambulant d) 1 and 7 hr after 15 mg oral A.M. dose ambulant. Initially 10 ng/ml at 0.25 hr e) 1.5 and 7 hr after 15 mg oral A.M. dose, supine. Initially 10 ng/ml at 1 hr f) 0.5 and 7 hr after 15 mg oral P.M. dose, ambulant. Initially 0 ng/ml at 0.25 hr Estimated from graph Drug- and alcohol-free healthy 20-30 yr olds, normal sleep/wake patterns. CIRCADIAN RHYTHMS; ADULTS; BLOOD PLASMA; ANESTHETICS; COMPARATIVE EVALUATIONS	Klotz, U. Ziegler, G. 1982 Clinical Pharmacology and Therapeutics 32(1):107-112

5-Benzoxazoleacetic acid, 2-(4-chlorophenyl)-alpha-methyl-
51234-28-7
C16-H12-Cl-N-O3
MW 301.74

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8643 Blood, plasma	Ingestion	HPLC	a) 7 b) 9 c) 6 d) 6	a) Not given b) Not given c) Not given d) Not given	a) 58 +or- 11 mg/l b) 62 +or- 14 mg/l c) 67 +or- 23 mg/l d) 72 +or- 12 mg/l	a) 103 +or- 22 ml/min, 7 patients b) 42 +or- 6 ml/min, 9 patients c) 22 +or- 7 ml/min, 6 patients d) 0 ml/min, 6 arrive dialysis patients Creatinine clearance, patients with impaired renal function Dose: 600 mg, oral. 21-79 yr olds, wt 46.4-96.6 kg. KIDNEY DISEASES; BLOOD PLASMA; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTIPYRETICS; DRUGS	Aronoff, G.R. Osawa, T. DeSante, K.A. Nash, J.F. Ridolfo, A.S. 1982 Clinical Pharmacology and Therapeutics 32(2):190-194

5-Oxa-1-azabicyclo(4.2.0)oct-2-ene-2-carboxylic acid, 7-((carboxy(4-hydroxyphenyl)acetyl)amino)-7-methoxy-3-(((1-methyl-1H-tetrazol-5- yl)thio)methyl)-8-oxo-
64952-97-2
C20-H20-N6-O9-S
MW 520.52

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8643 Blood, serum	Injection	Microbiological HPLC	20	a) Not given b) Not given	a) 62 ug/ml b) 22.2 ug/ml	a) Maternal blood at delivery, 5-110 min (mean 48 min) after infusion b) Cord blood Dose: 2 gm, IV, in 150 ml normal saline over 20 min Nulliparous women at high risk for infection following cesarean delivery FETUS; INFECTION; BLOOD SERUM; UTERUS; ANTIBIOTICS; DRUGS; MEASUREMENT METHODS; SURGERY; PREGNANCY	Bawdon, R.E. Cunningham, F.G Quirk, J.G. Roark, M.L. 1982 American Journal of Obstetrics and Gynecology 144:546-550
8644 Uterus	Injection	Microbiological HPLC	11	Not given	9.6 ug/gm	At delivery, 5-110 min (mean 48 min) after infusion of 2 gm in 150 ml normal saline over 20 min Nulliparous women at high risk for infection following cesarean delivery FETUS; INFECTION; BLOOD SERUM; UTERUS; ANTIBIOTICS; DRUGS; MEASUREMENT METHODS; SURGERY; PREGNANCY	Bawdon, R.E. Cunningham, F.G. Quirk, J.G. Roark, M.L. 1982 American Journal of Obstetrics and Gynecology 144:546-550

5-Thia-1-azabicyclo(4.2.0)oct-2-ene-2-carboxylic acid, 3-(((aminocarbonyl)oxy)methyl)-7-((2-furanyl(methoxyimino)acetyl)amino) 8-oxo, (6R-(6alpha,7beta(E)))-
55260-75-2
C16-H16-N4-O8-S
MW 420.42

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8545 Blood, plasma	Injection		7	a) 40-3.0 ug/l b) 50-1.2 ug/l c) 40-4.0 ug/l d) <2-11.0 ug/l e) <2-3.6 ug/l f) <2-1.8 ug/l	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) During pregnancy b) At delivery c) After delivery and establishment of menstrual cycle d) Cord plasma of mothers between dose and delivery e) Infants 6 hr after birth f) Infants 12 hr after birth Dose: 750 mg IV to mothers. Levels significantly lower during pregnancy. Estimated from graph. Patients with asymptomatic urinary tract infections, 11-35 wk of pregnancy. PREGNANCY; AMNIOTIC FLUID; BLOOD PLASMA; ANTIBIOTICS; COMPARATIVE EVALUATIONS; SWEDEN; ADULTS; FETUS; INFANTS; DRUGS	Philipson, A. Stiernstedt, C. 1982 American Journal of Obstetrics and Gynecology 142:823-828
8546 Blood, serum	Injection Peritoneal dialysis	Microbiological	a) 8 b) 7	a) 84-22 ug/ml b) 7-75 ug/ml	a) Not given b) Not given	a) 0.25 and 24 hr after 1 g IV bolus 1 hr before starting dialysis b) 0.5 and 12 hr after 2.5 g in 10 l dialysis solution. Final measurement 35 ug/ml at 24 hr. Estimated from graph 22-60 yr olds with stable chronic renal failure and on intermittent peritoneal dialysis PERITONEAL DIALYSIS; ADULTS; KIDNEY DISEASES; BLOOD SERUM; PERITONEAL FLUID; ANTIBIOTICS; DRUGS	LaBrecca, G. Biasioli, S. Chiaramonte, S. Fabris, A. Feriani, M. Pisani, E. Ronco, C. Zerri, L. 1988 International Journal of Clinical Pharmacology, Therapy and Toxicology 20(2):92-94
8547 Peritoneal fluid	Injection	Microbiological	8	16.7-7.5 ug/ml	Not given	1 and 6 hr after 1 g IV bolus 22-60 yr olds with stable chronic renal failure and on intermittent peritoneal dialysis PERITONEAL DIALYSIS; ADULTS; KIDNEY DISEASES; BLOOD SERUM; PERITONEAL FLUID; ANTIBIOTICS; DRUGS	LaBrecca, G. Biasioli, S. Chiaramonte, S. Fabris, A. Feriani, M. Pisani, E. Ronco, C. Zerri, L. 1988 International Journal of Clinical Pharmacology, Therapy and Toxicology 20(2):92-94

5-Thia-1-azabicyclo(4.2.0)oct-2-ene-2-carboxylic acid, 3-(((aminocarbonyl)oxy)methyl)-7-methoxy-8-oxo-7-((2-thienylacetyl)amino)-, (6R-cis)-
35607-66-0
C16-H17-N3-O7-S2
MW 427.46, MP 149-150 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0040 Amniotic Fluid	Injection	Microbiological	10	Not detected - 6.6 ug/ml	Not given	At delivery, 7-320 min after 1 g. IM to mothers. 18-35 yr olds TRANSPLACENTAL TRANSFER; BELGIUM; ADULTS; NEWBORN; AMNIOTIC FLUID; BLOOD SERUM; MILK; BLOOD, FETAL; ANTIBIOTICS; DRUG THERAPY; DRUGS	Dubois, M. Delapierre, D. Chanteux, L. Demonty, J. Lambotte, R. Fillet, G. Dresse, A. 1981 Journal of Clinical Pharmacology 21:477-483
0049 Blood, serum	Injection	Microbiological	a) 31 b) 27	a) 25.4-2.2 ug/ml b) 15.1-2.4 ug/ml	a) Not applicable b) Not applicable	a) 30 and 300 min after 1 g. IM. Initial measurement 14.5 ug/ml at 10 min. Maternal blood b) Fetal blood, at delivery, 45 and 300 min after 1 g. IM, to mothers. 3.0 ug/ml at 30 min No linear correlation. Range of means 18-35 yr olds TRANSPLACENTAL TRANSFER; BELGIUM; ADULTS; NEWBORN; AMNIOTIC FLUID; BLOOD SERUM; MILK; BLOOD, FETAL; ANTIBIOTICS; DRUG THERAPY; DRUGS	Dubois, M. Delapierre, D. Chanteux, L. Demonty, J. Lambotte, R. Fillet, G. Dresse, A. 1981 Journal of Clinical Pharmacology 21:477-483
0030 Blood, serum	Injection	Microbiological	a) 6 b) 12 c) 6 d) 3 e) 4	a) Not given b) Not given c) Not given d) Not given e) 0.1-4.1 mg/l	a) 43.9 +or- 12.2 mg/l b) 17.9 +or- 5.9 mg/l c) 11.9 +or- 5.5 mg/l d) 5.5 +or- 4.9 mg/l e) 1.3 mg/l	a) 0.5-1 hr b) 1-2 hr c) 2-3 hr d) 3-4 hr e) 4-5 hr Dose: 2 gm, IV Patients for abdominal or vaginal hysterectomy. Mean age 46 yr, mean wt 67.9 kg ENDOMETRIUM; MYOMETRIUM; FALLOPIAN TUBES; GERMANY; ADULTS; INFECTION; BLOOD SERUM; ANTIBIOTICS	Daschner, F. Petersen, E. Langmaack, H. Tronnhauser, M. 1982 Infection: European Journal for the Clinical Study and Treatment of Infections 10(6):341-342
0031 Endometrium	Injection	Microbiological	a) 5 b) 9 c) 3	a) Not given b) Not given c) Not given	a) 23.8 +or- 7.1 ug/g b) 9.0 +or- 6.0 ug/g c) 2.9 +or- 1.2 ug/g	a) 0.5-1 hr b) 1-2 hr c) 2-3 hr Dose: 2 gm, IV Patients for abdominal or vaginal hysterectomy. Mean age 46 yr, mean wt 67.9 kg ENDOMETRIUM; MYOMETRIUM; FALLOPIAN TUBES; GERMANY; ADULTS; INFECTION; BLOOD SERUM; ANTIBIOTICS	Daschner, F. Petersen, E. Langmaack, H. Tronnhauser, M. 1982 Infection: European Journal for the Clinical Study and Treatment of Infections 10(6):341-342

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5-Thia-1-azabicyclo(4.2.0)oct-2-ene-2-carboxylic acid, 3-(((aminocarbonyl)oxy)methyl)-7-methoxy-8-oxo-7-((2-thienylacetyl)amino)-, (6R-cis)-
35607-66-0
C16-H17-N3-O7-S2
MW 427.46, MP 149-150 C (decomp)

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8652 Fallopian tube	Injection	Microbiological	a) 6 b) 12 c) 5 d) 2 e) 2	a) Not given b) Not given c) Not given d) 0.2-0.5 ug/g e) Not given	a) 48.5 +or- 13.1 ug/g b) 14.9 +or- 3.5 ug/g c) 5.7 +or- 4.0 ug/g d) 4.6 ug/g e) 0.43 +or- 0.24 ug/g	a) 0.5-1 hr b) 1-2 hr c) 2-3 hr d) 3-4 hr e) 4-5 hr Dose: 2 gm, IV Patients for abdominal or vaginal hysterectomy. Mean age 46 yr, mean wt 67.9 kg ENDOMETRITIS; HYSTERITIS; FALLOPIAN TUBES; GERMANY; ADULTS; INFECTION; BLOOD SERUM; ANTIBIOTICS	Baschner, F. Petersen, E. Langmaack, H. Tranebauer, H. 1982 Infection: European Journal for the Clinical Study and Treatment of Infections 10(6):341-342
8653 Milk		Microbiological	15	<0.5 ug/ml	Not given	1-25 hr after 1 g, IM. Serum levels at 2 hr were 6-25 ug/ml. Limits of detection 0.5 ug/ml. TRANSPLACENTAL TRANSFER; BELGIUM; ADULTS; NEWBORN; AMNIOTIC FLUID; BLOOD SERUM; MILK; BLOOD, FETAL; ANTIBIOTICS; DRUG THERAPY; DRUGS	Dubois, H. Delapierre, D. Chantoux, L. Dumonty, J. Lambotte, B. Kramp, R. Dresse, A. 1982 Journal of Clinical Pharmacology 21:477-483
8654 Myometrium		Microbiological	a) 5 b) 13 c) 5 d) 2	a) Not given b) Not given c) 0.5-6.0 ug/g d) Not given	a) 42.6 +or- 7.5 ug/g b) 15.2 +or- 5.6 ug/g c) 4.9 ug/g d) 0.2 +or- 0.03 ug/g	a) 0.5-1 hr b) 1-2 hr c) 2-3 hr d) 4-5 hr Dose: 2 gm, IV Patients for abdominal or vaginal hysterectomy. Mean age 46 yr, mean wt 67.9 kg ENDOMETRITIS; HYSTERITIS; FALLOPIAN TUBES; GERMANY; ADULTS; INFECTION; BLOOD SERUM; ANTIBIOTICS	Baschner, F. Petersen, E. Langmaack, H. Tranebauer, H. 1982 Infection: European Journal for the Clinical Study and Treatment of Infections 10(6):341-342

5-Thia-1-azabicyclo(4.2.0)oct-2-ene-2-carboxylic acid, 3-(((5-methyl-1,3,4-thiadiazol-2-yl)thio)methyl)-8-oxo-7-(2-(1H-tetrazol-1-yl)acetamido)- (8 CI)
5-Thia-1-azabicyclo(4.2.0)oct-2-ene-2-carboxylic acid, 3-(((5-methyl-1,3,4-thiadiazol-2-yl)thio)methyl)-8-oxo-7-((1H-tetrazol-1-ylacetyl)amino)-, (6R-trans)- (9 CI)
25953-19-9
C14-H14-N8-O4-S3
MW 454.5, MP 198-200 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0655 Blood, plasma	Injection	Microbiological	17	a) 72-8 ug/ml b) 35-7 ug/ml	a) Not given b) Not given	a) 0 and 72 hr after 10 mg/kg IV for 2 min b) 0 and 72 hr after 10 mg/kg IP for 4 hr. Initially 11 ug/ml at 1 hr Estimated from graph 53.4 +or- 17 yr olds treated with continuous ambulatory peritoneal dialysis for 8.4 +or- 4.6 mo ADULTS; KIDNEY DISEASES; BLOOD PLASMA; ANTIBIOTICS; COMPARATIVE EVALUATIONS; DRUGS	Dunko, C.H. Aronoff, G.R. Brier, M.E. Sloan, R.S. Luft, F.C. 1983 Clinical Pharmacology and Therapeutics 33(1):66-72

5-Thia-1-azabicyclo(4.2.0)oct-2-ene-2-carboxylic acid, 3-(((5-methyl-1,3,4-thiadiazol-2-yl)thio)methyl)-8-oxo-7-(2-(1H-tetrazol-1-yl)acetamido)- (8 CI)
5-Thia-1-azabicyclo(4.2.0)oct-2-ene-2-carboxylic acid, 3-(((5-methyl-1,3,4-thiadiazol-2-yl)thio)methyl)-8-oxo-7-((1H-tetrazol-1-ylacetyl)amino)-, (6R-trans)- (9 CI)
25953-19-9
C14-H14-N8-O4-S3
MW 454.5, MP 198-200 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0656 Milk						Review. General pharmacological principles associated with excretion of drugs and chemicals in human milk. PENNSYLVANIA; UNITED STATES; ADULTS; INFANTS; MILK; SALIVA; URINE; ANALGESICS; ANTI-INFLAMMATORY AGENTS; ANTICOAGULANTS; ANTIPYRETICS; DIURETICS; DRUG THERAPY; DRUGS; MUSCLE RELAXANTS; CAFFEINE; NICOTINE; PESTICIDES; SODIUM; THEOPHYLLINES; ALCOHOLIC BEVERAGES; LACTATION; METABOLISM; METABOLITES; TOBACCOS	Berlin, C.M., Jr. 1981 Obstetrics and Gynecology 58(5)(supplement):17S-23S

5-Thia-1-azabicyclo(4.2.0)oct-2-ene-2-carboxylic acid, 3-((acetyloxy)methyl)-7-(((2-amino-4-thiazolyl)(methoxyimino)acetyl)amino)-8-oxo -, (6R-trans)-
66946-21-1
C16-H17-N5-O7-S2
MW 455.50

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0657 Blood, serum	Injection	Microbiological	6	a) 13.34-23.00 ug/ml b) 2.55-7.40 ug/ml	a) 17.57 ug/ml b) 5.00 ug/ml	a) At 30 min b) At 3 hr Dose 1 g IV/day, Im for > 2 days Patients undergoing pulmonary surgery. BLOOD SERUM; LUNGS; ANTIBIOTICS; DRUGS; SURGERY; FRANCE; ADULTS	Dune, J. Pultier, H. Berthoumieu, C. Monnier, J. 1981 La Nouvelle Presse Medicale 10:585-586
0658 Blood, serum	Injection	Microbiological		a) Not given b) Not given c) Not given d) Not given	a) 12 ug/ml b) 24 ug/ml c) >100 ug/ml d) 15 ug/ml	a) Peak, 20 min after 500 mg IM b) Peak, 20 min after 1 g IM c) 5 min after 1 g IV d) 2 hr after 1 g IV infusion Normal 30-64 yr olds, wt 60-80 kg BLOOD SERUM; URINE; ANTIBIOTICS; DRUGS; FRANCE; ADULTS	Acar, J.F. Guibert, J. Kitzis, M.D. 1981 La Nouvelle Presse Medicale 10:559-563
0659 Lung	Injection	Microbiological	6	16.56-18.60 ug/g	17.89 ug/g	3 hr after 1 g IV/day, IM for >2 days Patients undergoing pulmonary surgery. BLOOD SERUM; LUNGS; ANTIBIOTICS; DRUGS; SURGERY; FRANCE; ADULTS	Dune, J. Pultier, H. Berthoumieu, C. Monnier, J. 1981 La Nouvelle Presse Medicale 10:585-586
0660 Urine	Injection	Microbiological	6	a) Not given b) Not given c) Not given d) Not given	a) 560 +or- 167 ug/ml b) 983 +or- 167 ug/ml c) 1300 +or- 210 ug/ml d) 599 +or- 169 ug/ml	a) 0-6 hr after 500 mg IM b) 0-6 hr after 1 g IM c) 0-6 hr after 1 g IV d) 0-6 hr after 1 g IV infusion Normal 30-54 yr olds, wt 60-80 kg BLOOD SERUM; URINE; ANTIBIOTICS; DRUGS; FRANCE; ADULTS	Acar, J.F. Guibert, J. Kitzis, M.D. 1981 La Nouvelle Presse Medicale 10:559-563

5-Thia-1-azabicyclo(4.2.0)oct-2-ene-2-carboxylic acid, 3-(hydroxymethyl)-8-oxo-7-(2-(2-thienyl)acetamido)- acetate(ester) (8 CI)
5-Thia-1-azabicyclo(4.2.0)oct-2-ene-2-carboxylic acid, 3-((acetyloxy)methyl)-8-oxo-7-((2-thienylacetyl)amino)-, (6R-trans)- (9 CI)
153-01-7
C16-H16-N2-O6-S2
MW 396.44

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0661 Blood, serum	Injection	Microbiological	a) 6 b) 7	a) Not given b) Not given	a) 7 ug/ml b) Undetectable	a) Patients, at 4 hr b) Controls, at 2.5 hr after 1000 mg Dose, 1000 mg. Bedridden 75.6 yr olds, healthy 20 yr olds ADULTS; KIDNEY DISEASES; BLOOD SERUM; URINE; ANTIBIOTICS; COMPARATIVE EVALUATIONS	Yasuhara, H. Kobayashi, S. Sakamoto, K. Kumije, K. 1982 Journal of Clinical Pharmacology 22:483-488
0662 Blood, serum	Irrigation	Microbiological	10	a) 0-2.05 ug b) 0-1.00 ug c) 0-0.27 ug	a) 0.79 +or- 0.3 ug b) 0.19 +or- 0.13 ug c) 0.03 +or- 0.03 ug S.E.	a) 15 min, 8 cases b) 1 hr, 2 cases c) 2 hr, 1 case Patients with detectable levels After intraoperative irrigation with 2 g in 1000 ml normal saline 28.2 +or- 5.0 yr olds undergoing cesarean section, Aug 1-Nov 30, 1981, TX Endomyometritis in 1 patient TEXAS; INFECTION; BLOOD SERUM; URINE; ANTIBIOTICS; DRUGS; SURGERY; PREGNANCY	Duff, P. Gibbs, R.S. Jorgensen, J.E. Alexander, E. 1982 Obstetrics and Gynecology 60(4):485-412
0663 Urine	Injection	Microbiological	a) 6 b) 7	a) 32-82% of dose b) 53-97% of dose	a) Not given b) Not given	a) Patients, at 2 and 24 hr b) Controls, at 2 and 24 hr Dose, 1000 mg. 1000 mg, controls Bedridden 75.6 yr olds, healthy 20 yr olds ADULTS; KIDNEY DISEASES; BLOOD SERUM; URINE; ANTIBIOTICS; COMPARATIVE EVALUATIONS	Yasuhara, H. Kobayashi, S. Sakamoto, K. Kumije, K. 1982 Journal of Clinical Pharmacology 22:483-488
0664 Urine	Irrigation	Microbiological	10	3.9-86.0 ug/ml	37.83 +or- 9.27 ug/ml S.E.	0.5 +or- 0.1% of dose excreted within 2 hr after intraoperative irrigation with 2 g in 1000 ml normal saline 28.2 +or- 5.0 yr olds undergoing cesarean sections, Aug 1-Nov 30, 1981, TX Endomyometritis in 1 patient TEXAS; INFECTION; BLOOD SERUM; URINE; ANTIBIOTICS; DRUGS; SURGERY; PREGNANCY	Duff, P. Gibbs, R.S. Jorgensen, J.E. Alexander, E. 1982 Obstetrics and Gynecology 60(4):485-412

5-Thia-1-azabicyclo(4.2.0)oct-2-ene-2-carboxylic acid, 7-((hydroxyphenylacetyl)amino)-3-(((1-methyl-1H-tetrazol-5-yl)thio)methyl)-8-oxo -, (6R-(6alpha,7beta(R*)))-
34444-01-4
C18-H18-N6-O5-S2
MW 462.54

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0665 Blood, serum	Irrigation	Microbiological	10	a) 0.31-4.65 ug b) 0-3.65 ug c) 0-2.15 ug	a) 1.61 +or- 0.49 ug b) 0.70 +or- 0.30 ug c) 0.35 +or- 0.22 ug S.E.	a) 15 min, 10 cases b) 1 hr, 6 cases c) 2 hr, 3 cases Patients with detectable levels. After intraoperative irrigation with 2 g in 1000 ml normal saline 24.2 +or- 5.0 yr olds undergoing cesarean sections, Aug 1-Nov 30, 1981, TX Endomyometritis in 1 patient TEXAS; INFECTION; BLOOD SERUM; URINE; ANTIBIOTICS; DRUGS; SURGERY; PREGNANCY	Duff, P. Gibbs, R.S. Jorgensen, J.H. Alexander, G. 1982 Obstetrics and Gynecology 60(4):409-412
0666 Urine	Irrigation	Microbiological	10	9.25-200 ug/ml	65.1 +or- 26.1 ug/ml S.E.	1.7 +or- 0.06 of dose excreted within 2 hr after intraoperative irrigation with 2 g in 1000 ml normal saline 24.2 +or- 5.0 yr olds undergoing cesarean sections, Aug 1-Nov 30, 1981, TX Endomyometritis in 1 patient TEXAS; INFECTION; BLOOD SERUM; URINE; ANTIBIOTICS; DRUGS; SURGERY; PREGNANCY	Duff, P. Gibbs, R.S. Jorgensen, J.H. Alexander, G. 1982 Obstetrics and Gynecology 60(4):409-412

5-Thia-1-azabicyclo(4.2.0)oct-2-ene-2-carboxylic acid, 7-(2-amino-2-phenylacetamido)-3-methyl-8-oxo-, D- (8 CI)
5-Thia-1-azabicyclo(4.2.0)oct-2-ene-2-carboxylic acid, 7-((aminophenylacetyl)amino)-3-methyl-8-oxo-, (6R-(6alpha,7beta(R*)))- (9 CI)
15686-71-2
C16-H17-N3-O4-S
MW 347.4

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0667 Blood, plasma	Ingestion	Microbiological	5	32-1.5 ug/ml	Not given	3 and 48 hr after 500 mg. Initially 25 ug/ml at 1 hr Estimated from graph 53.4 +or- 17 yr olds treated with continuous ambulatory peritoneal dialysis for 8.4 +or- 4.6 mo ABULUS; KIDNEY DISEASES; BLOOD PLASMA; ANTIBIOTICS; COMPARATIVE EVALUATIONS	Dunke, C.H. Aronoff, G.R. Brier, M.E. Sloan, R.S. Luft, F.C. 1983 Clinical Pharmacology and Therapeutics 33(1):66-72

5H-Dibenz(b,f)azepine-5-carboxamide
298-46-4
C15-H12-N2-O
MW 236.26, MP 306-306 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
9660 Blood, serum						Review. Assessment of clinical use of laboratory determinations for metals, anticonvulsive agents, and cardiovascular drugs. ADULTS; AGE; CHILDREN; ANEMIA; BONE DISEASE; DISEASES; MENTAL RETARDATION; METAL POISONING; NUTRITIONAL DEFICIENCIES; SKIN DISEASES; BLOOD; BLOOD PLASMA; BLOOD SERUM; LIVER; URINE; ANTIARRHYTHMIC AGENTS; ANTICONVULSANTS; DIURETICS; DRUG THERAPY; DRUGS; HYPNOTICS; MUSCLE RELAXANTS; SEDATIVES; TRANQUILIZERS; REVIEW; COPPER; DIAZEPAM; IRON; LEAD; LITHIUM; THEOPHYLLINES; ZINC; PAIRED	Weise, E.B. Rosenthal, I.M. 1978 Journal of Analytical Toxicology 2:166-171

5H-Dibenz(b,f)azepine, 10,11-dihydro-5-(3-methylamino)propyl)- (8 CI)
5H-Dibenz(b,f)azepine-5-propanamine, 10,11-dihydro-N-methyl- (9 CI)
50-47-5
C19-H22-N2
MW 266.37, BP 172-176 C at 0.02 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
9660 Blood, plasma			1	Not applicable	190 ng/ml	Dose 250 mg/day, with 400 mg/day chlorpromazine from day 36-52 of treatment 39 yr old patient with major depression Dexamethasone suppression test showed hypothalamic-pituitary-adrenal axis dysfunction unresponsive to therapeutic levels of drug ADULTS; BEHAVIOR DISORDERS; BLOOD PLASMA; DRUG THERAPY; DRUGS; PSYCHOTROPIC DRUGS	Rothschild, A.J. Schatzberg, A.F. 1983 American Journal of Psychiatry 139(1):129-130

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5H-Dibenz(b,f)azepine, 10,11-dihydro-5-(3-methylamino)propyl)- (8 CI)
5H-Dibenz(b,f)azepine-5-propanamine, 10,11-dihydro-N-methyl- (9 CI)
50-47-5
C18-H22-N2
MW 266.37, BP 172-174 C at 0.02 mm Hg

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8670 Blood, plasma	Ingestion	HPLC	28	a) Not given b) Not given c) Not given d) Not given	a) 200 +or- 133 ng/ml b) 73 +or- 34 ng/ml c) 46 +or- 17 ng/ml d) 46 +or- 27 ng/ml	a) After 2.77 mg/kg 3x/day for 3 wk, responding subjects b) After 2.5 mg/kg 3x/day for 3 wk, non-responding subjects c) 2-OH-desipramine (metabolite) after 2.77 mg/kg 3x/day for 3 wk responders d) 2-OH-desipramine (metabolite) after 2.5 mg/kg 3x/day for 3 wk, non-responders 2-OH-desipramine levels did not correlate with antidepressant response. Hospitalised depressed patients Orthostatic hypertension, delirium, obstipation, urinary retention, severe tremor, seizures. Major adverse reactions more frequent when antipsychotic drugs also given. ADULTS; BEHAVIOR DISORDERS; BLOOD PLASMA; ANTIDEPRESSIVE AGENTS; COMPARATIVE EVALUATIONS; HEPATOLYSIS; PSYCHOSOMATIC DRUGS	Nelson, J.C. Bock, J.L. Jatlow, P.I. 1983 Clinical Pharmacology and Therapeutics 33(5):583-589
8671 Blood, plasma	Ingestion		4	a) 64-1961 ng/ml b) 18-62 ng/ml	a) Not given b) Not given	a) 42 day steady-state level (combined with desipramine) after 16 days, dose increasing to 300 mg/d. Patients previously stabilized on fluphenazine decanoate and benztropine mesylate b) Hydroxy-metabolite levels All patients exceeded threshold levels of 100 ng/ml (both drugs) for treatment of major depression. 22-20 yr olds with either bipolar affective depression or residual schizophrenia with depression SCHIZOPHRENIA; DEPRESSION; BLOOD PLASMA; ANTIDEPRESSIVE AGENTS; COMPARATIVE EVALUATIONS; ADULTS; BEHAVIOR DISORDERS; DRUGS	Sirin, S.G. Cooper, T.B. Rifkin, A.H. Brenner, R. Lieberman, J.A. 1983 American Journal of Psychiatry 139(1):160-166

5H-Dibenz(b,f)azepine, 5-(3-(dimethylamino)propyl)-10,11-dihydro- (8 CI)
5H-Dibenz(b,f)azepine-5-propanamine, 10,11-dihydro-N,N-dimethyl- (9 CI)
50-48-7
C19-H24-N2
MW 280.40, BP 160 C at 0.01 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0672 Blood		GC	6	a) Not given b) Not given c) Not given d) Not given	a) 11 +or- 10 mg/l b) 4.0 +or- 1.8 mg/l c) 0.14 +or- 0.03 mg/l d) 0.22 +or- 0.13 mg/l	a) Fatal overdoses b) Fatal overdoses desipramine (metabolite) c) Deaths by other causes, therapeutic drug involvement d) Deaths by other causes, therapeutic drug involvement, desipramine Autopsies, MD MARYLAND; AUTOPSIES; BLOOD; ANTIDEPRESSIVE AGENTS; FORENSIC MEDICINE; DRUGS; DRUG ABUSE; HEART; LIVER; MUSCLES	Webb, J.M., Jr. Caplan, Y.H. Crooks, C.R. Wagner, W.J. 1983 Journal of Analytical Toxicology 6:308-316
0673 Blood, plasma	Ingestion	TLC	24	a) 79-320 nmol/l b) 73-652 nmol/l c) 23.63 nmol/l d) 38-134 nmol/l e) 0-63 nmol/l f) 79-389 nmol/l g) 550-1175 nmol/l h) 0-78 nmol/l i) 0-223 nmol/l j) 28-146 nmol/l k) 61-361 nmol/l l) 73-1298 nmol/l m) 0.65 nmol/l n) 0-166 nmol/l o) 0-66 nmol/l	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given m) Not given n) Not given o) Not given	a) Imipramine, dose 50-100 mg/day b) Desipramine (metabolite) c) 2-OH-imipramine (metabolite) d) 2-OH-desipramine (metabolite) e) Didesipramine (metabolite) f) Imipramine, dose 50-300 mg/day g) Desipramine (metabolite) h) 2-OH-imipramine (metabolite) i) 2-OH-desipramine (metabolite) j) Didesipramine (metabolite) k) Imipramine, dose 100 mg/day l) Desipramine (metabolite) m) 2-OH-imipramine (metabolite) n) 2-OH-desipramine (metabolite) o) Didesipramine (metabolite) Steady state concentrations in hospitalized, elderly depressed patients in a)-e), recurrent depression outpatients in f)-j), placebo crossover study with diabetic neuropathy outpatients k)-o). 30-70 yr olds CANADA; ADULTS; BEHAVIOR DISORDERS; BLOOD PLASMA; BLOOD SERUM; ANTIDEPRESSIVE AGENTS; COMPARATIVE EVALUATIONS; DRUGS	Gram, L.F. Bjerre, M. Kragh-Sorensen, P. Kvinesdal, B. Molin, J. Pedersen, O.L. Reisby, N. 1983 Clinical Pharmacology and Therapeutics 33(3):335-342

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5H-Dibenz(b,f)azepine, 5-(3-(dimethylamino)propyl)-10,11-dihydro- (8 CI)
5H-Dibenz(b,f)azepine-5-propanamine, 10,11-dihydro-N,N-dimethyl- (9 CI)
50-49-7
C19-H24-N2
MW 280.40, BP 160 C at 0.01 mm Hg

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8674 Blood, plasma	Ingestion		4	a) 365-2181 ng/ml b) 56-99 ng/ml	a) 850 ng/ml b) 77 ng/ml	a) 42 day steady-state level (combined with desipramine) after 16 days, dose increasing to 300 mg/d. Patients previously stabilized on fluphenazine decanoate and benztropine mesylate b) Hydroxy-metabolite levels All patients exceeded threshold levels of 100 ng/ml (both drugs) for treatment of major depression. 22-30 yr olds with either schizo affective depression or residual schizophrenia with depression SCHIZOPHRENIA; DEPRESSION; BLOOD PLASMA; ANTIDEPRESSIVE AGENTS; COMPARATIVE EVALUATIONS; ADULTS; BEHAVIOR DISORDERS; DRUGS	Siris, S.G. Cooper, T.B. Rifkin, A.H. Brenner, R. Lieberman, J.A. 1982 American Journal of Psychiatry 139(1):104-106
8675 Blood, serum	Ingestion	TLC	3	a) 1000-14 nmol/l b) 500-20 nmol/l c) 175-16 nmol/l d) 230-22 nmol/l e) 50-12 nmol/l f) 100-12 nmol/l	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) Imipramine, overdose b) Desipramine (metabolite) c) 2-OH-imipramine (metabolite) d) 2-OH-desipramine (metabolite) e) Didesipramine (metabolite) f) Imipramine-N-oxide (metabolite) Combined data estimated from graphs 25-47 yr old overdose cases CANADA; ADULTS; BEHAVIOR DISORDERS; BLOOD PLASMA; BLOOD SERUM; ANTIDEPRESSIVE AGENTS; COMPARATIVE EVALUATIONS; DRUGS	Gram, L.F. Bjerre, M. Kragh-Sorensen, P. Kvinesdal, B. Molin, J. Pedersen, O.L. Reisby, N. 1983 Clinical Pharmacology and Therapeutics 33(3):335-342
8676 Heart		GC	6	a) Not given b) Not given c) Not given d) Not given	a) 10 +or- 5.6 mg/kg b) 7.3 +or- 3.1 mg/kg c) 0.41 +or- 0.11 mg/kg d) 1.6 +or- 1.3 mg/kg	a) Fatal overdoses b) Fatal overdoses, desipramine (metabolite) c) Deaths by other causes, therapeutic drug involvement d) Deaths by other causes, therapeutic drug involvement, desipramine Autopsies, ND MARYLAND; AUTOPSIES; BLOOD; ANTIDEPRESSIVE AGENTS; FORENSIC MEDICINE; DRUGS; DRUG ABUSE; HEART; LIVER; MUSCLES	Hobb, J.H., Jr. Caplan, Y.H. Crooks, C.R. Margner, W.J. 1982 Journal of Analytical Toxicology 6:209-210

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5H-Dibenz(b,f)azepine, 5-(3-(dimethylamino)propyl)-10,11-dihydro- (8 CI)
5H-Dibenz(b,f)azepine-5-propanamine, 10,11-dihydro-N,N-dimethyl- (8 CI)
50-49-7
C19-H24-N2
mm 288.88, BP 160 C at 0.01 mm Hg

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8677 Liver		GC	6	a) Not given b) Not given c) Not given d) Not given	a) 43 +or- 46 mg/kg b) 32 +or- 2.5 mg/kg c) 1.6 +or- 0.2 mg/kg d) 1.7 +or- 0.7 mg/kg	a) Fatal overdoses b) Fatal overdoses, desipramine (metabolite) c) Deaths by other causes, therapeutic drug involvement d) Deaths by other causes, therapeutic drug involvement, desipramine Autopsies, MD MARYLAND; AUTOPSIES; BLOOD; ANTIDEPRESSIVE AGENTS; FORENSIC MEDICINE	Hobb, J.E., Jr. Caplan, Y.H. Crooks, C.R. Morgner, W.J. 1983 Journal of Analytical Toxicology 6:209-216
8678 Muscle		GC	6	a) Not given b) Not given c) Not given d) Not given	a) 6.8 +or- 6.4 mg/kg b) 2.5 +or- 2.2 mg/kg c) 1.4 +or- 0.20 mg/kg d) 1.7 +or- 0.7 mg/kg	a) Fatal overdoses b) Fatal overdoses, desipramine (metabolite) c) Deaths by other causes, therapeutic drug involvement d) Deaths by other causes, therapeutic drug involvement, desipramine Autopsies, MD MARYLAND; AUTOPSIES; BLOOD; ANTIDEPRESSIVE AGENTS; FORENSIC MEDICINE; DRUGS; DRUG ABUSE; HEART; LIVER; MUSCLES	Hobb, J.E., Jr. Caplan, Y.H. Crooks, C.R. Morgner, W.J. 1983 Journal of Analytical Toxicology 6:209-216

5H-Dibenzo(a,d)cycloheptene-delta(5,gamma)-propylamine, 10,11-dihydro-N-methyl- (8 CI)
1-Propanamine, 3-(10,11-dihydro-5H-dibenzo(a,d)cyclohepten-5-ylidene)-N-methyl- (9 CI)
72-69-5
C19-H21-N
MW 263.37, MP 213-215 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8679 Blood, plasma	Ingestion	GC	23	a) 100-40 nmol/l b) 200-50 nmol/l c) 450-95 nmol/l d) 250-60 nmol/l e) 400-200 nmol/l f) 1400-1700 nmol/l g) 200-80 nmol/l h) 500-400 nmol/l i) 1300-1400 nmol/l	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given	a) Nortryptyline, 8 controls b) Unconjugated 10-hydroxynortryptyline (metabolite), 8 controls c) Conjugated 10-hydroxynortryptyline, 8 controls d) Nortryptyline, 5 hemodialysis patients e) Unconjugated 10-hydroxynortryptyline, 5 hemodialysis patients f) Conjugated 10-hydroxynortryptyline, 5 hemodialysis patients g) Nortryptyline, 10 chronic renal failure patients not dialysed h) Unconjugated 10-hydroxynortryptyline, chronic renal failure patients not dialysed i) Conjugated 10-hydroxynortryptyline, 10 chronic renal failure patients not dialysed 24 and 72 hr after 75 mg. Range of means, estimated from graph Patients and controls. ANTIDEPRESSIVE AGENTS; COMPARATIVE EVALUATIONS; HEMODIALYSIS; ADULTS; KIDNEY DISEASES; BLOOD PLASMA; DRUGS	Dawling, S. Lynn, R. Hooser, R. Braithwaite, R. 1982 Clinical Pharmacology and Therapeutics 32(3):322-329
8680 Blood, plasma	Injection Ingestion	Electron impact-mass fragmentography	4	a) 20-0.5 nM b) 10-0.5 nM	a) Not given b) Not given	a) 1 and 175 hr after 50 mg oral amitriptylin b) 25 and 160 hr after 25 mg IM amitriptylin Estimated from graph. No significant differences in area under concentration-time curve data Healthy subjects BLOOD PLASMA; ANTIDEPRESSIVE AGENTS; DRUGS; COMPARATIVE EVALUATIONS; ADULTS; BEHAVIOR DISORDERS	Hallstrom, B. Alvan, G. Bertilsson, L. Sjoqvist, F. 1982 Clinical Pharmacology and Therapeutics 32(5):660-667

5H-Dibenzo(a,d)cycloheptene-delta(5,gamma)-propylamine, 10,11-dihydro-N,N-dimethyl- (8 CI)
1-Propanamine, 3-(10,11-dihydro-5H-dibenzo(a,d)cycloepten-5-ylidene)-N,N-dimethyl- (9 CI)
50-48-6
C20-H23-N
MW 277.39, HP Hydrochloride 196-197 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
0601 Blood		GC	9	a) Not given b) Not given c) Not given d) Not given	a) 4.81 +or- 3.32 mg/l b) 1.9 +or- 2.84 mg/l c) 0.16 +or- 0.13 mg/l d) 0.20 +or- 0.19 mg/l	a) Fatal overdoses, amitryptyline b) Fatal overdoses, nortriptyline (metabolite) c) Deaths by other causes, incidental therapeutic involvement of amitryptyline d) Deaths by other causes, incidental therapeutic involvement, nortriptyline Autopsies, MD MARYLAND; AUTOPSIES; BLOOD; ANTIDEPRESSIVE AGENTS; FORENSIC MEDICINE; DRUGS; DRUG ABUSE; HEART; LIVER; MUSCLES	Hubb, J.H., Jr. Caplan, Y.H. Crooks, C.R. Morgner, W.J. 1982 Journal of Analytical Toxicology 6:209-216
0602 Blood, serum	Ingestion	GC	3	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable g) Not applicable h) Not applicable	a) 54 ng/ml b) 67 ng/ml c) <5 ng/ml d) <15 ng/ml e) 50 ng/ml f) 61 ng/ml g) 19 ng/ml h) 19 ng/ml	a) Amitriptyline (AMT), mother, after 75 mg/day for 2 wk b) Nortriptyline (NT), metabolite, dose same as a) c) AMT, infant, mother received 75 mg/day for 3 wk d) NT, infant, dose same as c) e) AMT, mother, after 10 wk treatment (75 mg/day 1st 6 wk, 100 mg/day next 3 wk 75 mg/day 1 wk before measurement) f) NT, mother, dose same as e) g) AMT, mother, after 19 wk treatment (25 mg/day 3 wk before measurement) h) NT, mother, dose same as g) Drug in sustained release form. Infant received about 1/100 dose administered to mother 30 yr old depressed woman and her 3 1/2 mo old breastfed infant ADULTS; INFANTS; BLOOD SERUM; MILK; ANTIDEPRESSIVE AGENTS; DRUG THERAPY; DRUGS; LACTATION	Brinen-Rasmussen, L. Halgreaor, J. Jorgenson, A. 1982 Psychopharmacology 76:94-95

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5H-Dibenzo(a,d)cycloheptene-delta(5,gamma)-propylamine, 10,11-dihydro-N,N-dimethyl- (8 CI)
1-Propanamine, 3-(10,11-dihydro-5H-dibenzo(a,d)cycloheptan-5-ylidene)-N,N-dimethyl- (9 CI)
50-48-6
C20-H23-N
MW 277.39, HP Hydrochloride 196-197 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8683 Blood, serum	Ingestion	GC	18	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 31.3 +or- 5.9 ng/ml b) 79.3 +or- 7.5 ng/ml c) 92.9 +or- 7.6 ng/ml d) 12.7 +or- 2.8 ng/ml e) 45.8 +or- 8.0 ng/ml f) 58.4 +or- 10.8 ng/ml	a) 1 hr after A.M. dose b) 2 hr after A.M. dose c) 3 hr after A.M. dose d) 1 hr after P.M. dose e) 2 hr after P.M. dose f) 3 hr after P.M. dose Dose: 50 mg. Mean concentrations significantly higher in absorption phase but not in elimination phase after A.M. dose Healthy, 22-31 yr olds, mean wt 60.6 +or- 2.2 kg. Japan JAPAN; ADULTS; BLOOD SERUM; ANTIDEPRESSIVE AGENTS; DRUGS; COMPARATIVE EVALUATIONS	Nakano, S. Hollister, L.E. 1983 Clinical Pharmacology and Therapeutics 33(4):483-489
8684 Blood, whole	Injection Ingestion	HPLC	3	a) 90-20 ng/ml b) 1.5-6.0 ng/ml c) 60-3.0 ng/ml d) 4.5-2.0 ng/ml e) 50-3.5 ng/ml f) 20-11 ng/ml g) 1.2-4 ng/ml h) 30-0 ng/ml i) 22-12 ng/ml j) 10-4 ng/ml k) 12-1.5 ng/ml	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given	a) Initially and 56 hr after 40 mg IV b) Nortriptylin, initially and 46 hr after 40 mg IV. Final level 5 ng/ml at 56 hr c) Initially and 56 hr after 20 mg IV d) 10-hydroxy amitriptylin, 4 and 12 hr after 20 mg IV. Initially 2.3 ng/ml e) Initially and 56 hr after 80 mg oral. f) Nortriptylin, initially and 46 hr after 80 mg oral Final level 15 ng/ml g) 10-hydroxy nortriptylin, initially and 55 hr after 80 mg oral h) 4 and 57 hr after 40 mg oral. Initially 3.9 ng/ml i) 10-hydroxy nortriptylin, 5 and 57 hr after 40 mg oral. Initially 8 ng/ml j) Nortriptylin, 5 and 57 hr after 40 mg oral. Initially 3 ng/ml k) 10-hydroxy amitreptylin, 5 and 57 hr after 40 mg oral. Initially 5 ng/ml Estimated from graph Healthy 21-61 yr olds, wt 51-80 kg. ADULTS; BEHAVIOR DISORDERS; BLOOD; ANTIDEPRESSIVE AGENTS; COMPARATIVE EVALUATIONS; DRUGS	Schulz, P. Turner-Tomiyasu, K. Smith, S. Giacomini, K.M. Blaschke, T.F. 1983 Clinical Pharmacology and Therapeutics 33(3):360-366

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5H-Dibenzo(a,d)cycloheptene-delta(5,gamma)-propylamine, 10,11-dihydro-N,N-dimethyl- (8 CI)
1-Propanamine, 3-(10,11-dihydro-5H-dibenzo(a,d)cyclohepten-5-ylidene)-N,N-dimethyl- (9 CI)
50-48-5
C20-H23-N
MW 277.39, MP Hydrochloride 196-197 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8685 Heart		GC	9	a) Not given b) Not given c) Not given d) Not given	a) 5.9 +or- 4.2 mg/kg b) 4.7 +or- 4.8 mg/kg c) 0.43 +or- 0.29 mg/kg d) 1.1 +or- 1.3 mg/kg	a) Fatal overdoses, amitryptyline b) Fatal overdoses, nortriptyline (metabolite) c) Deaths by other causes, incidental therapeutic involvement of amitryptyline d) Deaths by other causes, incidental therapeutic involvement, nortriptyline Autopsies, MD MARYLAND; AUTOPSIES; BLOOD; ANTIDEPRESSIVE AGENTS; FORENSIC MEDICINE; DRUGS; DRUG ABUSE; HEART; LIVER; MUSCLES	Hebb, J.H., Jr. Caplan, Y.H. Crooks, C.R. Mergner, W.J. 1982 Journal of Analytical Toxicology 6:209-216
8686 Liver		GC	9	a) Not given b) Not given c) Not given d) Not given	a) 22 +or- 19 mg/kg b) 7.6 +or- 3.6 mg/kg c) 1.3 +or- 0.81 mg/kg d) 1.9 +or- 1.2 mg/kg	a) Fatal overdoses, amitryptyline b) Fatal overdoses, nortriptyline (metabolite) c) Deaths by other causes, incidental therapeutic involvement of amitryptyline d) Deaths by other causes, incidental therapeutic involvement, nortriptyline Autopsies, MD MARYLAND; AUTOPSIES; BLOOD; ANTIDEPRESSIVE AGENTS; FORENSIC MEDICINE; DRUGS; DRUG ABUSE; HEART; LIVER; MUSCLES	Hebb, J.H., Jr. Caplan, Y.H. Crooks, C.R. Mergner, W.J. 1982 Journal of Analytical Toxicology 6:209-216
8687 Milk		GC	1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) 100 ng/ml b) 75 ng/ml c) 72 ng/ml d) 63 ng/ml e) 30 ng/ml f) <30 ng/ml	a) Amitriptyline (AMT), after 75 mg/day for 2 wk b) Nortriptyline (NT), metabolite, dose same as a) c) AMT, after 10 wk treatment (75 mg/day 1st 6 wk, 100 mg/day next 3 wk, 75 mg/day 1 wk before measurement) d) NT, dose same as c) e) AMT, after 19 wk treatment (25 mg/day 3 wk before measurement) f) NT, dose same as e) Drug sustained release amitriptyline beginning 3 1/2 mo after delivery 30 yr old depressed mother ADULTS; INFANTS; BLOOD SERUM; MILK; ANTIDEPRESSIVE AGENTS; DRUG THERAPY; DRUGS; LACTATION	Brixen-Rasmussen, L. Halgrener, J. Jorgensen, A. 1982 Psychopharmacology 76:94-95

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5H-Dibenzo(a,d)cycloheptene-delta(5,gamma)-propylamine, 10,11-dihydro-N,N-dimethyl- (8 CI)
1-Propanamine, 3-(10,11-dihydro-5H-dibenzo(a,d)cycloheptan-5-ylidene)-N,N-dimethyl- (9 CI)
50-48-6
C20-H23-N
MW 277.39, HP Hydrochloride 196-197 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8680 Muscle		GC	9	a) Not given b) Not given c) Not given d) Not given	a) 1.7 +or- 1.1 mg/kg b) 0.96 +or- 1.2 mg/kg c) 0.08 +or- 0.16 mg/kg d) 0.19 +or- 0.20 mg/kg	a) Fatal overdoses, amitryptyline b) Fatal overdoses, nortriptyline (metabolite) c) Deaths by other causes, incidental therapeutic involvement of amitryptyline d) Deaths by other causes, incidental therapeutic involvement, nortriptyline Autopsies, MD MARYLAND; AUTOPSIES; BLOOD; ANTIDEPRESSIVE AGENTS; FORENSIC MEDICINE; DRUGS; DRUG ABUSE; HEART; LIVER; MUSCLES	Webb, J.H., Jr. Caplan, Y.H. Crooks, C.R. Mergner, W.J. 1983 Journal of Analytical Toxicology 6:209-216

6H-Dibenzo(b,d)pyran-1-ol, 6a,7,8,10a-tetrahydro-6,6-9-trimethyl-3-pentyl-, (6aR-trans)-
1972-08-3
C21-H30-O2
MW 314.45

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8669 Blood, plasma	Inhalation	GC/MS	1	a) Not applicable b) Not applicable c) Not applicable	a) 7.2 ng/ml b) 2.5 ng/ml c) 19 ng/ml	a) About 1 hr after smoking tetrahydrocannabinol (THC) b) 11-OH-THC 1 hr after THC c) 9-carboxy-THC 1 hr after THC) 6-fold higher levels in milk. CASE HISTORIES; INFANTS; BLOOD PLASMA; MILK; DRUG ABUSE; DRUGS	Perez-Reyes, M. Wall, M.E. 1982 New England Journal of Medicine 307(13):819-820

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6H-Dibenzo(b,d)pyran-1-ol, 6a,7,8,10a-tetrahydro-6,6-9-trimethyl-3-pentyl-, (6aR-trans)-
1972-00-3
C21-H30-O2
MW 314.45

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8690 Milk	Inhalation	GC/MS	2	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) 185 ng/ml b) 340 ng/ml c) 4 ng/ml d) 60.3 ng/ml e) 1.1 ng/ml f) 1.6 ng/ml	a) Mother who smoked delta-9-tetrahydrocannabinol (THC) 1X/day b) Mother who smoked delta-9 THC 7X/day c) 11-OH THC from b) d) Subject b), one hour after exposure e) 11-OH-THC from d) f) 9-carboxy-THC from d) Baby of d) had 347 ng THC, 67 ng of 11-OH-THC and 611 ng of 9-carboxy-THC in fecal sample. Healthy marijuana smokers, in their late 20's. CASE HISTORIES; INFANTS; BLOOD PLASMA; MILK; DRUG ABUSE; DRUGS	Perez-Reyes, M. Wall, M.E. 1982 New England Journal of Medicine 307(13):819-820

7-Chloro-3-methyl-2H-1,2,4-benzothiadiazine 1,1-dioxide
364-90-7
C8-H7-Cl-N2-O2-S
MW 230.70

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8691 Blood, plasma	Injection	HPLC	3	50-100 ug/ml	Not given	Therapeutic level for treatment of chlorpropamide overdoses. Dose 50-100 mg/hr IV Overdose cases, nondiabetics, 24 yr old female alcoholic, 14 yr old boy, and 19 yr old woman ADOLESCENTS; ADULTS; SUICIDE; BLOOD PLASMA; DRUG ABUSE	Meatherall, R.C. Green, P.T. Konich, S. Donen, N. 1981 Journal of Analytical Toxicology 5:287-291

7a-3-hydroxy-4,5,6,7-tetrahydroisoxolo[5,4-c]pyridinium bromide (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8692 Blood, serum	Ingestion	TLC Radiometry	a) 1 b) 1	a) 280-5 ng/ml b) 160-2 ng/ml	a) Not given b) Not given	a) 0.5 and 24 hr after 10 mg (0.15 mg/kg) b) 0.5 and 24 hr after 10 mg (0.15 mg/kg) Estimated from graph 46 and 51 yr olds ADULTS; BLOOD SERUM; FECES; URINE; DRUGS; METABOLITES	Schultz, H. Anes-Jorgensen, T. Bogaso, K.P. Jorgensen, A. 1981 Acta Pharmacologica et Toxicologica 49:116-124

9,10-Ethanoanthracene-9(10H)-propylamine, N-methyl- (8 CI)
9,10-Ethanoanthracene-9(10H)-propanamine, N-methyl- (9 CI)
10262-69-8
C20-H23-N
MW 277.41, MP 92-94 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8693 Blood, serum		HPLC		a) Not given b) Not given	a) 376 +or- 137 ng/ml b) 314 +or- 168 ng/ml	a) <65 yr olds, 4 wk after 113 mg/day b) >65 yr olds, 4 wk after 77 mg/day 34-78 yr old depressive patients GERMANY; ADULTS; AGE; BLOOD SERUM; ANTIDEPRESSIVE AGENTS; DRUG THERAPY; DRUGS	Nasse, C. 1982 Gerontology 28(Suppl. 1):113-115

9,10-Secocholesta-5,7,10(19)-triene-3beta,25-diol (8 CI)
9,10-Secocholesta-5,7,10(19)-triene-3,25-diol, (3beta,5E,7E)- (9 CI)
19356-17-3
C27-H44-O2
MW 400.65

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
8694 Blood, serum	Ingestion		18	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 28 ng/ml b) 20 ng/ml c) 37 ng/ml d) 24 ng/ml e) 38 ng/ml f) 20 ng/ml g) 32.7 ng/ml h) 12.9 ng/ml	a) After supplement of 400 IU vitamin D/day for 3 wk, 9 cases b) No supplement for 3 wk, 9 cases c) Supplemented group at 6 wk d) Unsupplemented group b) at 6 wk e) Supplemented group at 12 wk f) Unsupplemented group at 12 wk g) Supplemented group at 26 wk h) Unsupplemented group at 26 wk Levels in a)-d) estimated from graph Significant difference in e), f) ($p<0.01$) 6 infants in h) <11 ng/ml and 2 of these <4 ng/ml. Average of 35 minutes sunshine daily, both groups. Healthy, full-term, breast-fed infants, 17 Caucasian and 1 Asian-Indian No clinical signs of rickets including craniotabes, rachitic rosary, or widened wrists INFANTS; NUTRITIONAL DEFICIENCIES; BLOOD SERUM; VITAMIN D; LACTATION; METABOLITES	Greer, F.R. Searcy, J.E. Levin, R.S. Steichen, J.J. Steichen-Asche, P.S. Tsang, R.C. 1982 Journal of Pediatrics 100(6):919-922

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15. Supplementary Notes

16. Abstract (Limit: 200 words)

A comprehensive data base of chemicals identified in human biological media (tissues and body fluids) has been established under the direction of the Environmental Protection Agency's Office of Toxic Substances Exposure Evaluation Division. This centralized resource of body-burden information was inspired by the concern of government scientists over continuing reports of toxic chemicals in human tissues and body fluids.

Body burden is a reflection of exposures to food, air, and water contaminants, as well as pharmaceuticals. The systematic acquisition of body-burden data will facilitate a more relevant assessment of human exposure to toxic chemicals and xenobiotics than was previously possible using environmental contamination levels.

Data were obtained primarily from the open literature through manual searches of selected journals. The file contains information on over 1000 chemicals that have been found in human biological media.

17. Document Analysis a. Descriptors

Body burden
Human tissues/body fluids
Residues

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

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